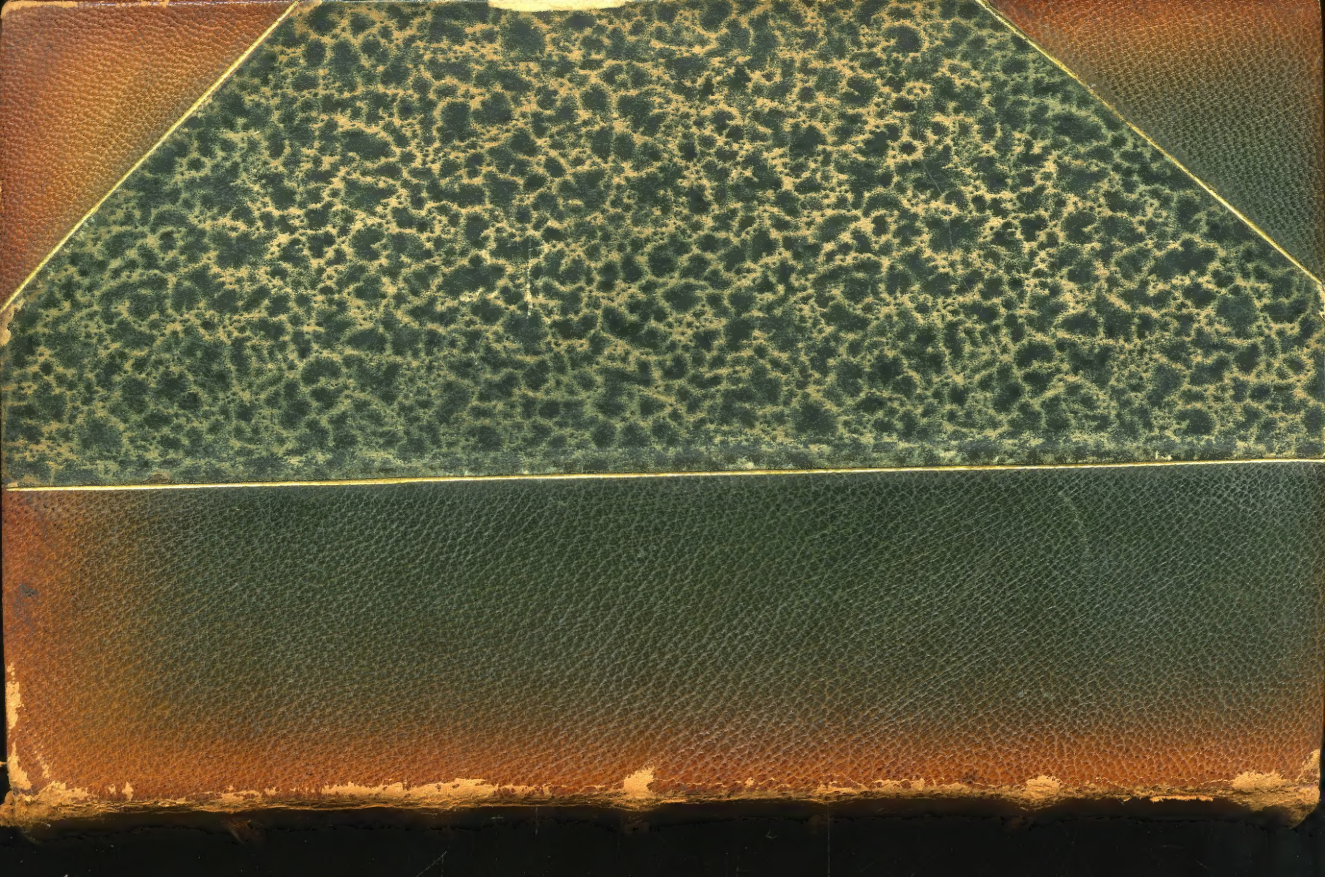

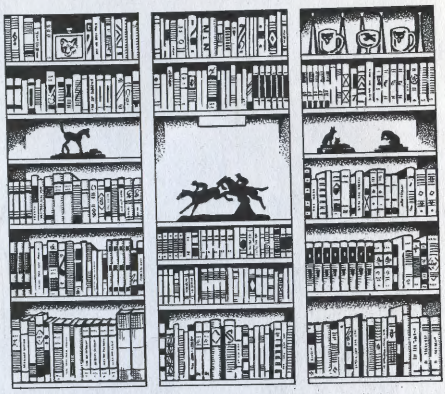

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PISCATORIAL REMINISCENCES AND GLEANINGS.

PISCATORIAL

REMINISCENCES AND GLEANINGS

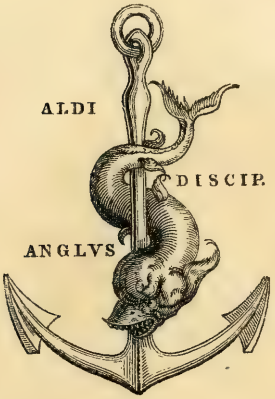
BY AN OLD ANGLER AND

BIBLIOPOLIST.

TO WHICH IS ADDED A CATALOGUE OF BOOKS

ON ANGLING.

THOMAS BOOSEY



LONDON
WILLIAM PICKERING
1835

CHARLES WHITTINGHAM
LONDON

PREFACE.

A PREFACE has been so long the customary method of an author introducing himself to his readers, that it has become almost a breach of good manners to obtrude on the public notice without it. Cap in hand, then, his first prefatory remark is, that the Piscatory collection which follows, was commenced by him very many years ago, solely for his own amusement, and was so continued, until it became of such magnitude as to awaken a thought that these high-way and by-way gatherings might also prove not altogether unacceptable to the public in general, but more particularly to *the gentle brothers of the craft*. From boyhood to his present decline in the vale of years, the author has been a practical Angler, as well as a diligent collector of whatever fell in his way that was in any degree connected with his favourite amusement. As a bookseller and publisher, of some little notoriety, it may be supposed that his opportunities of piscatory gleaning have been both numerous and varied; and if he cannot

boast of offering much that is original, he may at least claim something on the score of industry, in letting nothing escape unnoticed that came before him. The practice of Angling has been so often and so well described, that while he cannot altogether pass over his favourite pursuit, without some glancings at the best methods of fishing with rod and line; the most judicious choice of times and seasons; and the most favourable selection of stations for the purpose, as they have presented themselves in his own practice; he, nevertheless, principally builds his hope of interesting the reader by his anecdotical and bibliographical notices.

In this age of improvement, even our sports are wont to be offered to us with a philosophic halo around them. *Walton* long ago made Angling a medium for inculcating the most fervent piety and the purest morality. Nor can the finny tribes themselves fail to excite in our minds surprise and admiration, whether we consider the singularities of their construction, the diversities of their forms, or their vast importance to man. On these interesting subjects, the author has confined himself to a few cursory remarks in his introductory chapter, and to the small

gleanings from the labours of Cuvier and Roget, which commence his Piscatorial reminiscences. Fearful of wading beyond his depth, he has principally directed his attention to such anecdotes, and facts, as he trusts will prove acceptable to the public in general, and to Anglers in particular.

The subjects of the work will be offered under the following divisions:—1st. Descriptive Anecdotes of British Fishes and Fishing. 2nd. Descriptive Anecdotes of Foreign Fishes and Fishing. 3rd. The Naturalization of Sea Fish to Fresh Water. 4th. A Continuation of Anecdotes connected with Fish and Fishing. 5th. The Bibliography of Angling, which portion the author hopes will be found the most complete of any previous catalogue of British works on Angling.

The Editor gladly avails himself of this opportunity of returning his best thanks to Sir Henry Ellis, for the handsome manner which he has allowed him the free use of his printed and manuscript catalogue of Books on Angling, which gives considerable interest to the volume.

T. B.

INTRODUCTION.

As the aqueous surface of the globe is supposed to exceed the terrestrial by one third, it is evident that the inhabitants of the seas and rivers must form a very distinguished feature in Zoology. In the vast world of waters the animal kingdom presents the extremes of bulk and minuteness; from the myriads of minute beings, which would be invisible to us without the assistance of the microscope, up to those stupendous masses, whales and cachalots. Until natural history attained some precision, the term "fish," however, was often misapplied, and was used to include all aquatic animals whatever; thus cetaceous, molluscous, and crustaceous animals were most erroneously admitted into the class of Fishes.

Fortunately for the necessary precision of zoological classification, fish are now readily separated from other vertebrated animals, by their capability of absorbing atmospherical

air through the medium of water. Air is the *pabulum vitæ* equally of the fish and the fisher, but with a difference which at first sight fills our minds with astonishment; for reverse their several positions, and death is the inevitable consequence. When we say fish breathe through the medium of water, we assert what is readily demonstrable: for immerse a fish into distilled water, which is only water deprived of its air, and such fish dies as quickly as a man submerged. Water, in its natural state, restores to the blood of fishes its vital and arterial qualities, by means of the oxygen contained in the air, which the water holds in suspension; the machinery for this purpose, in fishes, being within the gills, as in ourselves it is within the lungs. Their organisation, like that of quadrupeds, is supported by means of a skeleton, either *bony* or *cartilaginous;* and their motions are effected by muscular masses, nourished by red, but cold blood; such muscular masses being, as in ourselves, excited into action by nervous influence derived from a brain, and distributed by means of a spinal rope of medullary matter. The extremities of quadrupeds are represented in fishes by fins, which perform their motions with surprising strength and celerity.

By the *dorsal* and *anal* fins their lateral movements are effected; elevation and depression are promoted by the *pectoral;* the *caudal* or *tail-fin* propels them forward, the *ventral* supports them when stationary; and many are further assisted in rising or depressing themselves by an *air bladder.* Numerous facts disprove the opinion that the senses of fishes are not acute. The eye of the trout, fixed and immoveable as it is, sees from the bottom of the river the minutest midge or gnat as soon as it drops, and the lively worm is taken with eagerness, when one that is dead or diseased, is refused, as much probably by the exercise of the olfactory, as of the visual powers. The scepticism now so fashionable with regard to the virtues of certain oils used by old fishermen, is probably erroneous, and it is not unlikely that the sebaceous glands in the heron's legs are attractive to fish. Nor are fishes without the sense of hearing, although destitute of either external conch or internal cochlea, for the firing of a gun will cause the basking fishes immediately to fall to the bottom. Their taste is displayed in refusing certain matters, while others are taken with avidity: neither are their organs of touch so obtuse as

is supposed. The poacher tickles the trout, and the sleeping jack can only be haltered by passing the wire over his body without its touching him.

The propagation of fish also offers subjects of much admiration. The greater number are oviparous, but they are careful to deposit their ova in situations, where they are protected, as well as in such as afford food and shelter for the young fry. As the members of this class mostly prey upon each other, it was necessary that their continuance should be guarded by their numbers, and thus hundreds of thousand eggs are deposited in the annual spawnings of some fish. Fish are not stationary: at one time they affect the littoral, at another the pelagic waters: many make extensive migrations, and the vast journeyings of the herrings are not a fable, but on the contrary, are instinctive movements of the shoals, either in search of food, or of convenient spawning grounds. For this purpose the salmon tribe become at one period of the year inhabitants of Rivers, and at another of the Ocean.

Of the importance of fish to mankind, the anecdotical part of this volume affords sufficient proof. From the earliest times the

inhabitants of the sea-shore have been almost supported by fish, and the transportation of them from place to place, as a luxury, is no less diffusive of wealth and employment. When their numbers become overwhelming in appearance, they can be rendered valuable for manure. Our houses are illuminated by the oil they yield; their bones are converted to a thousand useful purposes; their skins are not without utility to the arts, and their scales ornament the persons of the loveliest part of the creation.

A systematic classification of fishes greatly assists the study of their nature and properties; in accordance with which view the following slight sketch is submitted of their arrangement under the Natural System of the late Baron Cuvier, where they form the last class of vertebrated animals, divisible into two grand families of *bony* and *cartilaginous* fishes, or of *acanthopterygians* and *chondropterygians*, the first of which divisions, it may be remarked, embraces more than three fourths of all the known fishes. The subdivisions are as follow:—

THE FIRST SERIES OF FISHES, OR ACANTHOPTERYGII.

I. *Acanthopterygii* (proper). This order presents members interesting to the Angler; as the *perch*, the *miller's-thumb*, and the *stickle-bat*. The marine members of the order are very numerous, of which the *mackerel*, *basse*, and *gurnard*, form familiar instances. The principal characteristic of the order is the spinous processes furnished by the dorsal fin.

II. *Malacopterygii Abdominales*. This order includes the greatest number of objects of angling sports, as the *carp*, the *tench*, the *barbel*, the *gudgeon*, &c. A second family of the order embraces the *pike*, as a third owns the widely diffused *salmonidæ*, and the more important one of the *trutta* or *trout*. The Cuverian characters of this order are the suspension of the ventral fins to the under part of the belly, and behind the pectoral fins, without being attached to the humeral bone.

III. *Malacopterygii Subbrachiati*. This order presents as its first family, the *gadites*, whose type is the well known *cod*, with its varieties of *haddock*, *whiting*, *hake*, *pollock*, &c. In another family the epicure will find the *turbot*, with the vast tribe known as *flat-fish*. This order is characterised by ventrals attached under the pectorals, and a pelvis which is immediately suspended to the bones of the shoulder.

IV. *Malacopterygii Apodes*. This order is principally confined to one natural family, of which the fa-

miliar type is the *muræna*, or *eel*, or of fishes which have an elongated form, a thick and soft skin, which scarcely suffers their scales to appear, but few crests and cæca. Almost all have natatory bladders, which frequently exhibit singular forms.

V. *Lophobranchii.* That singular figure which we meet with, called the *hippocampus*, or *sea-horse*, is a prominent instance of this confined order; the distinctive characters of which are drawn from peculiarities in the gills, which, " instead of being, as usual, pectiniform, are divided into little round tufts, singularly disposed in pairs along the branchial arch." The *lophobranchii* are also cuirassed from one extremity of the body to the other; this renders them mostly angular in figure.

VI. *Plectognathi.* This order offers forms of the most grotesque figures, as seen in the inflated bodies of the balloon and globe fishes, and in that of the moon-fish. The *plectognathi* are either very pugnacious in their own disposition, or otherwise very liable to the attack of others, as their ample means of offence and defence testify: some are surrounded with prickles, or are armed with spear-like excrescences, or formidable teeth. Other distinctive characters of this orde are derived from peculiarities in the bones of the head. The *balistes*, which is a member of this order, is so named from its fancied resemblance to the ancient warlike engine called balistes, which projected darts to a great distance. The marine balistes have a long spine inclined on the back, which

they can elevate at pleasure, and seriously wound any antagonist.

THE SECOND SERIES OF FISHES, OR CHONDROPTERYGII.

Whilst the members of the first class, as already observed, present a skeleton essentially osseous, the skeletons of the chondropterygii are cartilaginous only. The fishes of this series, however, are of great power and magnitude, and are divided into such as breathe by means of free gills, and such as have confined branchiæ.

The First Order of *Chondropterygii*, or the Seventh Order of Fishes, generally embraces the *Sturiones*, or chondropterygious tribes, with free gills. The *sturgeon*, which is the most prominent of these, is well known for his great size, the firmness of his flesh, and the mailing of his skin.

The Second Order of *Chondropterygii*, or the Eighth Order of Fishes generally, is composed of such as have fixed gills; that is, of such as, instead of having gills free at the external edge, which allows the water to escape by one common opening, eject it by a series of holes or perforations in the common integument. Of the genera which compose this order, the *Shark* and *Ray* are the most prominent instances.

PISCATORIAL REMINISCENCES AND GLEANINGS.

I HAVE inserted a few preliminary observations upon the structure, body, and senses of Fishes, culled from Cuvier, and Dr. Roget's admirable work, "Animal and Vegetable Physiology," &c. &c. EDITOR.

THE body of a fish is nearly of the same specific gravity as the water it inhabits. The effect of gravity is therefore almost wholly counterbalanced by the buoyant force of that fluid; for the weight of a mass of water equal in bulk to the body itself, is the exact measure of this buoyant force. If this weight were precisely the same as that of the fish, the animal would be able to remain suspended in any part of the fluid without the necessity of employing any voluntary motion or exertion for that purpose; but as the body of a fish is generally a little heavier than the fluid medium,

especially if it be fresh water, it is necessary for the animal to give its body some degree of motion, in order to prevent its sinking. *Dr. Roget.*

FORM OF FISHES.

We cannot fail to perceive, on the most cursory glance, the beautiful adaptation of the form and structure of all these animals to the properties of the element in which they are destined to reside. In order that the fish might glide through the fluid without the least resistance, all its vital organs have been collected into a small compass, and the body has been reduced into a compact oval, compressed laterally, and tapering to a thin edge both before and behind, for the purpose of readily clearing the water as the fish darts forward, and also obviating the retardation that might arise from the reflux of the water collected behind. *Dr. Roget.*

The entire structure of fish is evidently adapted to swimming, as that of birds to flight; suspended in a fluid nearly as heavy as themselves, the former have no need of wings to sustain them in it. A great number of species have (immediately under the spine) an air-vessel, which, by compression or dilatation, changes the specific gravity of the fish, and assists it in arising or descending in the water. Progression is executed by the motion of the tail, right and left. *Cuvier.*

Progressive motion of fishes is effected by the simplest means; the principal instrument employed for this purpose is the tail; for the fins are merely auxiliary organs, serving chiefly to balance the body, whilst it receives its propulsion from the tail. A fish moves in the water on the same principle as a boat is impelled by sculling. *Dr. Roget.*

ORGANS OF FISH.—HEARING.

Artedi, and many celebrated authors, maintain that fish hear, and that all cetaceous fishes have the auditory passages apparent.

Swammerdam also asserts that fish hear, and adds, that they have a wonderful labyrinth of the ear for that purpose.

John Hunter supposes that fish are possessed of the perfect organs of hearing; and that the organ creating that power consists of a hard substance resembling gristle, and in some species crusted over with a thin plate of bone that admits of no collapse, and which he denominates an ear.

When I was at Moorshedabad, the collector had a large tank full of fish, that were petted by his daughter, who erected a bell, which, when rung, brought all the fish from the different parts of the pool, to be fed. So tame were they, that

they took bread out of the hands of their young mistress. As no animals have stronger instincts than fish, I see no reason why they should not be capable of recognizing, and perhaps attaching themselves to them that feed them.

Medwin's Angler in Wales.

FINE SENSE OF SMELL IN FISH.

M. La Cepede observes, that their smell is the most exquisite. The distance which a fish will traverse in pursuit of prey, attracted by odorous emanations, is immense. The seat of smell is the true eye of fish, which directs them in thickest darkness, in the most troubled and agitated waters. There is every reason to believe that certain odours attract or repel fish; this seems unquestionable. The seat of this sense is in their nostrils. *Cuvier.*

SPEAKING, OR VOICE, OF FISH.

How do we know that fish have not as many, and perhaps more vocal expressions, than birds; they all of them seem to have been formed nearly upon the same model. Some fly, others swim. It is written in Genesis, that God created at the same time birds and fishes, from the bosom of the waters. Fishes are provided with the five senses. Why should they not have the faculty of speaking like the rest? Water is thoroughly penetrated with the air which we breathe: why might they

not, from that air, and a tongue and throat, form vibrations and sounds, too nice for our ears, but might be heard in every species. There are many sounds in the air which we do not hear; how much more in the water noises insensible to us; and fishes by that means speak, without being audible to us. *Gent. Mag.* ix. 228.

Mr. Thompson of Hull says, it has been often remarked that fish have no voices. Some tench, which I caught in ponds, made a croaking, like a frog, for a full half hour, whilst in the basket at my shoulder. When the herring is caught, it utters a shrill cry like a mouse. Also, the gurnard will continue to grunt, like a hog, some time after it is taken, and, some say, make a noise like a cuckoo, from which he takes one of his country names. *Mag. Nat. Hist.* vol. iii.

Mr. Yarrell observes:—The maigre, a large sea fish, when swimming in shoals, utters a grunting or purring noise, that may be heard from a depth of twenty fathoms; and, taking advantage of this circumstance, three fishermen once took twenty maigres by a single sweep of their net.

The coasts of Great Britain do yield such a continued sea harvest of gain and benefit to all those that with diligence do labour in the same, that no time or season of the year passeth away

without some apparent means of profitable employment, especially to such as apply themselves to fishing, which, from the beginning of the year to the latter end, continueth upon some part or other of our coasts; and these, in such infinite shoals and multitudes of fishes, are offered to the takers. *Sir John Boroughs.*

This harvest (says *Mr. Barrow*) is ripe for gathering at all seasons, without payment of rent and taxes, tillage, manure, &c. &c. it is inexhaustible, owing to the extraordinary fecundity of fish of the most valuable kinds.

THE FECUNDITY OF FISH.

Although the ova are in most instances proportionably smaller than in any other class of animals, the ovaria in many fish are larger than the body. Thus the herring produces from 20,000 to 37,000; the carp, upwards of 200,000; the tench, 380,000; the flounder, a million.—*Med. Ang. in Wales.*

MR. HARMER'S TABLE.

	Weight.	Spawn.
Carp	16 oz.	101,200
Cod	15 lb.	3,687,760
Flounder	3 oz.	133,407
Herring	4 oz.	32,663
Lobster	14 oz.	7,227
Mackarel	20 oz.	454,961

	Weight.		Spawn.
Perch	8½ oz.	.....	28,323
Pickerel	56 oz.	.....	49,304
Prawn	127 gr.	.....	3,806
Shrimp	17½ d.	.....	3,057
Roach	2 oz.	.....	9,604
Smelt	2 oz.	.....	38,278
Sole	14 oz.	.....	38,772
Tench	40 oz.	.....	383,252

Phil. Transact. 1767, *Article* xxx.

There are many additions to this table, and different weights to each fish ; but the first line is sufficient to show the amazing produce of a single fish. *Editor.*

According to *Leuwenhoeck*, a single sturgeon's roe amounted to the amazing number of one hundred and fifty thousand million of eggs, and the roe of a crab to four millions and ninety-six thousand, also a middling-size cod to nine million and three hundred and eighty-four thousand.

VARIETY OF FISH BROUGHT TO MARKET AT HAVERFORD-WEST IN ONE DAY.

Lobster,	Shad,
Crab,	Pilchard,
Prawn,	Garr,
Segar,	Conger,
Oyster,	Sand Eel,

Cockle,	Eel,
Muscle,	Hound,
Shrimp,	Flounder,
Salmon,	Plaise,
——— Trout,	Sole,
Turbot	Ray,
Mackerel,	Mullet,
Cod,	Bass,
Whiting,	Gurnard,
Colefish,	Ballan,
Bibb,	Trout.
Herring,	*Gent. Mag.*

HATCHING SPAWN OF FISH.

The Chinese have a method of hatching the spawn of fish, and thus protecting it from those accidents which ordinarily occur to so large a portion of it. The fishermen collect, with care, on the margin and surface of the waters, all those gelatinous masses which contain the spawn of fish. After they have found a sufficient quantity, they fill with it the shell of a fresh hen's egg, which they have previously emptied, stop up the holes, and put it under a sitting fowl. At the expiration of a certain number of days, they break the shell in water warmed by the sun. The young fry are presently hatched, and are kept in pure fresh water till they are large enough to be thrown into a pond with the old fish. The sale

of spawn, for this purpose, forms an important branch of trade in China. Vide in this book fish in China. *Lit. Gems.*

In China, in the month of May, a great number of ships are employed by the country people in the sale of fish spawn, which they sell to merchants by measure, and send it into the country to stock ponds, &c. &c.

Grosier, Desc. de la Chine, vol. i.

Dr. Bradley, professor of botany in the University of Cambridge, in his "Treatise on Husbandry," speaks of having hatched the spawn of fish in earthen pans filled with water, having a coat of earth at the bottom; adding fresh river water every other day, with wheat flour, grated bread for roach, dace, bleak, &c. besides pike, eel, and flounders, in other pans.

Gent. Mag. lxxiii. 1108.

Blumenbach, in his "Manual of Natural History," mentions the *reproductive power*, and independent vitality, with reference to the amphibia. The extraordinary strength of the reproductive power in several amphibia, and the astonishing facility with which the process is carried on, depend, if I mistake not, on the great magnitude of their nerves, and the diminitive proportion of their brain, &c. &c.

The following may serve as one of the many instances of Providence in the main *producing system*, and is every where maintained. Even insects people inland ponds and streams with fish, and are often carried by themselves to great distances. The great river beetle, which lives habitually on the eggs of fishes, climbs sometimes in the evening, on the reeds, high enough for its flight, and then takes wing. One was caught whilst flying, and being put into water, it emitted the eggs by which it was gorged, some, in part digested, and some not at all; these eggs produced fish of various sorts.—*Bullet. Univ.* 1829, p. 145; *Gill's Tech. Rep.* 1828, p. 333.

SOME OF THE USES TO WHICH FISH ARE APPLIED. —FISH MADE INTO BREAD AND BISCUIT.

At the city of Escier they dry their fish in the sun, and, by its extreme heat, reduce them to powder, like meal, and knead them into loaves, or mix them into a liquid form like frumenty; and in consequence of the scarcity of grain, the natives make a kind of biscuit of the substance of the larger fish (suppose tunny), in the following manner; first, they chop it up into very small particles, and moisten the preparation with a liquor rendered thick and adhesive by a mixture of flour, which gives to the whole the consistence of paste. This they form into a kind of bread,

which they dry in the sun; a stock of these biscuits are laid up to serve the year's consumption. Besides feeding on it themselves, they accustom their cattle, cows, camels and horses, to feed on dried fish.

M. Polo's Travels, by Marsden, 4to. p.729.

The Indians in all the Upper Oroonoko, fry fish, and dry them in the sun, and reduce them to powder without separating the bones. I have seen masses of fifty pounds of this flour, which resembles that of cassava. When it is wanted for eating, it is mixed with water, and reduced to a paste. *Humboldt.*

Savage nations, as the Kamstschatdales, Brazilians, &c. possess the art of preparing fish in a great variety of ways, even as a kind of flour for bread, &c. &c.

The inhabitants of the eastern coast of Middle Asia clothe themselves in the tanned skin of fishes, &c. *Medwin.*

Cows, horses, and sheep, feed on fish in Persia; the cows have humps, and resemble those of India. Milk, butter, and ghee are very abundant; this is more remarkable, as the cattle have but little pasture, and their chief food is *dried fish*, a little salted; they are very fond of this, and with pounded date-stones, it is their chief

food for a large portion of the year; the milk is not spoiled; all thrive on this diet.

Fraser's Travels.

FISH, AS MANURE.

Fish forms a powerful manure in whatever state it is applied. The refuse of pilchards is used in Cornwall, throughout the county, as manure, with excellent effect,—the pilchards are usually mixed with sand, oil, or sea-weed, to prevent them raising too luxuriant a crop.—The effects are perceived for years.

It is easy to explain the operation of fish as manure, skin gelatinous,—fat or oil is found in all fishes, &c. &c.,—a single pilchard will manure a foot of ground.

Loudon's Encyclop. Agricult.

It appears, from a report of the *Doncaster Agricultural Association*, that whale oil has been employed as a manure for turnip crops at one-third the expense of bone manure.

Lit. Gaz. June 13, 1835.

*** Many other notices of fish as manure are inserted under the heads of the different fish.

SHIP SAVED BY A FISH.

In the year 1825, a vessel from Europe, bound to Quebec, struck against some loose ice, and sprung a leak below low water, which entered so

fast, as to defy the utmost exertions of the crew to keep the hold clear. Just as they were on the point of taking to their boats, the leak was discovered to have suddenly stopped; every person on board was astonished, nor could they account for it; a few days after brought them into port, where, on examination, a large hole was found beaten through the plank, in which was a live fish, exactly filling the orifice, which thus saved the ship.

Fish and Fisheries.

BRIDGE SUPPORTED BY MUSCLES.

Biddeford bridge is supported, and prevented from being driven away, by strong threads of muscles fixed to the stone work. The corporation keep boats in employ to bring muscles to it, and persons are liable to transportation who remove these muscles. *Dr. Cruwys.*

INDIAN INK.

Mr. Bennett says that several large cephalopodous animals, as loligo of Lamarck, calmars of Cuvier, were frequently taken in a sein at Port Jackson; they discharged, when captured, a large quantity of thick black fluid, a very minute proportion of which renders turbid a large quantity of water. It is from this fluid that the material known by the name of China, or Indian ink is manufactured. The ancients used this fluid also as writing ink.

LIMPET FORMING A MARKING INK.

Of the species of Limpet, a shell fish found here (*Minehead*) at low water, some are red, others white, black, brown, yellow, and sand colour; when the shell is picked off, there will appear a light vein lying traversely in a little furrow next the head of the fish, which may be taken out by a bodkin or any other pointed instrument, and *will form an excellent marking ink*. The letters or figures made with this liquor will change to several colours, when placed in the sun, according to the time of day and season of the year, and will ultimately finish in a *fair bright crimson*, which, after being laid out to dry, will abide all future washing.

Collinson's Hist. of Somerset.

PRESERVATION OF FISH.

Dr. M'Culloch, of Edinburgh, has ascertained that the antiseptic quality of sugar is sufficient to preserve fish in most excellent condition. He states that this substance is so active, that fish may be preserved in a dry state, and perfectly fresh, by means of sugar alone, and even with a very small quantity of it. He has thus kept salmon, whitings, and cod, for an indefinite length of time; and by this simple means fresh fish may be kept in that state some days, so as to

be as good when boiled as when just caught. It is added, that if dried and kept free from mouldiness, there seems no limit to their preservation; and they are much better this way than when salted. The sugar gives no disagreeable taste. This process is particularly valuable in making what is called kippered salmon; and the fish preserved in this manner are far superior in quality and flavour to those which are salted or smoked. If desired, as much salt may be used as to give the taste that may be required; but this substance does not conduce to their preservation. In the preparation, it is barely necessary to open the fish, and to apply the sugar in the muscular part, placing it in an horizontal position for two or three days, that this substance may penetrate. After this it may be dried; and it is only further necessary to wipe and ventilate it occasionally, to prevent mouldiness. A table-spoonful of brown sugar is sufficient, in this manner, for a salmon of five or six pounds weight; and if salt is desired, a tea-spoonful or more may be added. Saltpetre may be used instead, in the same proportion, if it is desired to make the kipper hard.

Placing fish in ice when in a putrefactive state will stop the decomposition—it must be cooked immediately it is taken out of the ice.

Council of Health, Paris.

PRESERVATION OF FISH DURING CARRIAGE.

The belly of the fish to be opened, and the internal parts sprinkled with powdered charcoal.

New Monthly Mag.

The most favourable time to transport fish from one place to another, is the winter, provided it is not too cold,—the age from three to four years.

Sonini's Buffon.

LONGEVITY OF FISHES.

Respecting the longevity of fishes, from reasoning we might be induced to conjecture, that it was not intended by nature that the duration of their lives should be fixed to such a short space of time, nor the expansion of size, to such narrow limits, as that of terrestrial animals; for the bones of fishes are so much of a cartilaginous nature, as to admit of being expanded by a natural increment for a much greater number of years than the harder bones of land animals. In the royal pond at Marli, in France, there are some fishes that are said to have been preserved since the time of Francis I.

Dr. Anderson.

CHINESE ART OF FATTENING FISH.

Tanks and small ponds are generally met with in gardeners' grounds, where they are used to fatten fish in, and afterwards to water the garden,

—this stew, or pond, is filled with as many young store fish as it will hold, which can be easily done, as almost all the fish in China are brought to market alive---placed in the stew, they are regularly fed morning and evening, their food is chiefly boiled rice, to which is added the blood of any animals they may kill, the wash from their stewing-pots and dishes, or any offal or vegetable matter which the fish will eat: it is also said that some olaceous medicaments are used, to make them more voracious, but of this the writer could obtain no authentic account. Fish so fed, and treated, advance in size rapidly; a species of perch from three to four inches, arrive to eight or nine inches in a few months, and are then brought to market,---the pond is entirely cleared out once a year. *Journal of Science*, 1827.

COMMENDATIONS UPON ANGLING.

The art of angling, or fishing, says *Daubenton*, places within the reach of man a number of animated beings which furnish us with nutriment, though separated from us by the different element which they inhabit; man triumphs over all obstacles by the superiority of his understanding, framing the most ingenious methods, drawing the fishes from the bottom of their waters, where they considered themselves sheltered from his attacks.

Fishing seems to have preceded all other sports. Some authors say that *Belus* was the first inventor of this art. It is probable that after the deluge, as fish being the only animals that were not destroyed, fishing naturally became the first art that *Noah* and his family practised, to obtain their subsistence.

This art, also, was well known to the Greeks in the time of Homer: the Romans were still more perfect in it. Plutarch also informs us that Marc Anthony and Cleopatra were great lovers of the art of angling, which was their principal recreation. The Gauls, also, were not ignorant of this art, as they passed a law, with a fine, to prevent persons fishing for eels with a net. If we consider that fish are almost alone in their possession of the waters, which forms the greatest part of the globe, we may have a proper idea of the importance of fishing, when we reflect that the element which they inhabit is so naturally opposed to our immediate access to it, we may conceive what skill and patience are required to subdue such a numerous class of animals. Fishing followed the progress of civilization, and is become a great and important branch of commerce to most nations. Angling, as an offset of this great art, is considered an agreeable relaxation, and is particularly so to the sedentary, and also to such as have been overtaken by

declining years, when few active enjoyments are left to us.

Angling is a diversion suited to the rich as well as to the more humble in life. When judiciously followed, it is both a healthy and an interesting pursuit.

Thus it is remarked again,

"In the art of angling man hath none to quarrel with but himself, and this enmity, if any, can be easily composed. This recreation falleth within the lowest fortune to compass,—affording also profit as well as pleasure, in following which exercise, a man may employ his thoughts in the noblest studies, almost as freely as in his closet, the minds of anglers being usually calm, and composed,—but when he has the worst success, he only loseth but a hook and line, or, perhaps, what he never possessed, a fish; and suppose he takes nothing, yet he enjoyeth a delightful walk by pleasant rivers, in sweet pastures, amongst odoriferous flowers, which gratify his senses and delight his mind; and these contentments induce many to choose those places of pleasure for their summer recreation and health." *Col. Venables.*

No life, my honest scholar, no life so happy, so pleasant, as the life of a well governed angler, —there we sit in cowslips, hear the birds sing, and possess ourselves in as much quietness as

these silver streams which we now see glide so quietly by us. *Isaac Walton.*

Isaac Walton being so well known, and his work on angling in the possession of most persons,---it has been thought proper to extract but little from him,---his commendation on angling is known to all lovers of the gentle art, so much so, that there are many *Waltonian Clubs* established throughout England, and even in various parts of America. *Editor.*

Sir Henry Wotton observes respecting angling, " 'Twas an employment for his idle time, which was not then idly spent, for angling was, after tedious study, a rest to his mind, a cheerer of his spirits, a diverter of sadness, a calmer of unquiet thoughts, a moderator of passions, a procurer of contentedness, and that it begot habits of peace and patience in those that professed and practised it."

Fishing is a kind of hunting by water, be it with nets, weeles, baites, *angling*, or otherwise, and yields all out as much pleasure to some men as dogs or hawkes. When they draw the fish upon the banke, saith *Nic. Henselius*, *Silesiographia*, *cap.* 3, speaking of the extraordinary delight his countrymen tooke in fishing. *T. Dubranius de piscibus* telleth how, travelling by

the highway side in Silesia, he found a nobleman booted up to the groines, wading himself, pulling the nets, and labouring as much as any fisherman of them all; and when some belike objected to him the basenesse of his office, he excused himselfe, that if other men might hunt hares, why should not he hunt carpes? Many gentlemen in like sort with us, will wade up to their arm-holes on like occasions, and voluntarie undertake that to satisfie their pleasure, which poore men for a good stipend would scarce be hired to undergoe. But he that shall consider the variety of baits, for all seasons, and pretty devices which our anglers have invented, peculiar lines, false flies, several sleights, &c. &c. will say that it deserves commendation, requires as much study as the rest, and is to be preferred before many of them. But this is still and quiet; and if so be the angler catch no fish, yet he hath a wholesome walk to the brooke's side, pleasant shade by the sweet silver streames, he hath good aire, and sweet smells of fine fresh meadow flowres, he hears the melody of birds, and sees the water-fowles, with their brood, which he thinketh better than the noise of hounds or hornes, and all the sport they can make. *Burton's Anat. Melan.* fol. p. 266.

The recreation which the various methods of taking fish afford, but particularly of that prac-

'tised with the rod and line, invites us by interesting ties to this branch of the animal creation. Poesy has almost exhausted her stores in praise of angling, and in prose it has been eulogized in hundreds of volumes. Numerous anecdotes crowd on our recollection, of the wonderful hold which the practice of angling has on the affections of man, and that from the prince to the beggar. The urchin of six ensnares the stickleback with rapture, and the veteran of seventy as eagerly weighs out the barble. Alike delighted, the one flatters himself almost a man, and the other rejoices in his semblance to youthful vigour. *Blaine.*

Angling, as a sport, requires as much enthusiasm as poetry, and as much patience as mathematics. I could not be more than six or seven years old, when I sallied out one day to the river Ayr, with a bent pin for a hook, as Christopher North has described so graphically and well; but instead of a minnow or a beardie (the loach or the stone loach of the south), I hooked a large trout; my yarn thread was strong enough to twitch out the trout to the green bank, where I stood; but the bank unfortunately sloped down to the water's edge, and my bent pin having no barb to take a firm hold, the trout slipped off, and spanged down the bank, and in an instant, to my unutterable grief, was lost in the dark

water. I never angled with bent pin again: as I grew older my passion for trout-fishing absorbed many of my thoughts and much of my time, but far from unprofitably; for I have no doubt that this had great influence on my studies to the present time. *James Rennie.*

But instances of this enthusiasm crowd upon us:—

"Twenty years ago, at two o'clock of a summer's morning, we left the school at Dalmally, where we were lodging, and walked up Glenorchy, fourteen miles, along to Inveruren. On the banks of that fishy loch we stood eying the sunshine beautifully warming the breezy dark moss-water, we unscrewed the brass head of our walking cane to convert it into a rod, when lo! the hollow was full of emptiness; we had left all the pieces on the chest of drawers in our bed-room. On recovering our stationary equilibrium, we put our pocket pistol to our head, and blew out its brains in the liquid character of Glenlevet; then down the glen we bended, and by half-past seven we were in the school-house."

Blackwood's Magazine.

Nor can we refrain from quoting the following handsome compliment to our London anglers, extracted from the same creditable source:—

"But of your true London anglers, we have always held and said they are at the top of the tree; they have trained themselves up to the utmost fineness and delicacy of execution, and in shyest water, where no brother of the angle in all Scotland could move a fin, they will kill fish. Their tackle, of course, is of the most exquisite and scientific kind; their entire set-out at the river's edge perfect, we should not presume to throw a fly with the least celebrated proficient of the Walton Club."

THE ANGLER.

In a morning stroll along the banks of the Alun (a beautiful little stream that flows down from the Welsh hills, and throws itself into the Dee), my attention was attracted to a group seated on the margin. On approaching, I found it to consist of a veteran angler, and two rustic disciples; the former was an old fellow with a wooden leg, with clothes very much worn, but carefully patched, betokening poverty, honestly come by, and decently maintained. He lost his leg at Camperdown, and this was the only stroke of good fortune he had ever experienced, as it produced him forty pounds per year. His face bore the marks of former storms, but present fair weather; its furrows had been worn into an

habitual smile; his iron grey locks hung about his ears. I soon fell into conversation with the old angler, and was so entertained, that under pretext of receiving instructions in his art, I kept company with him almost the whole day. On parting, I enquired after his place of abode, and happening to be in the village a few evenings afterwards, I had the curiosity to seek him out. I found him living in a small cottage, containing only one room, but a perfect curiosity in its method and arrangement. It was on the skirts of the village, on a green bank, a little back from the road, with a small garden in front, stocked with kitchen herbs, and adorned with a few flowers. The whole front of the cottage was overrun by a honeysuckle; on the top was a ship for a weather-cock. The interior was fitted up in a truly nautical style, his ideas of comfort and convenience having been acquired on the berth deck of a man-of-war. A hammock was slung from the ceiling; from the centre of the chamber hung the model of a ship, of his own workmanship; two or three chairs, a table, and a sea-chest, formed the principal moveables. About the wall was stuck up naval ballads, pictures of sea-fights, amongst which the battle of Camperdown held a distinguished place. His implements of angling were carefully disposed on nails and hooks about the room.

I found him seated on a bench, before the door, smoking his pipe in the evening sunshine; he had been angling all day, and gave me the history of his sport, being particularly animated about taking a large trout. His family consisted of a large black cat, with one eye, and a parrot, which he had caught in one of his voyages, and educated himself.

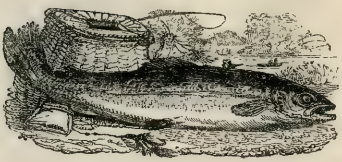
Washington Irving's Sketch Book.

ANECDOTES OF FISHES AND FISHING.

Before I proceed to the Anecdotes of Fish, I shall quote, from the *Supplement to Daniel's Rural Sports*, a most useful hint to persons engaged in angling, who may not be adepts in swimming. *Editor.*

"An accidental fall into water may be most dangerous to those ignorant of the art of swimming. By observing the directions here given, a person may save himself from drowning: if he falls into deep water, he will rise to the surface by floatage, and will continue there, if he does not elevate his hands; and the keeping them down is essential to his safety. If he moves his hands under the water, in any way he pleases, his head will rise so high as to allow him free liberty to breathe; and if in addition he moves his legs, exactly as in the action of walking up stairs, his shoulders will rise above the water, so that he may use less exertion with his hands, or apply them to other purposes."

THE SALMON.



The salmon delights in the most rapid streams, with gravelly bottoms; he is justly termed by some anglers the king of fresh-water fish. When hooked, he requires to be gently treated, as Sir Walter Scott says, by giving him line, but not too freely; in which case you are sure of your fish. The salmon tribe becomes at one period of the year a river, and at another a sea fish. The salmon leaves the sea for the rivers in the summer or autumn, according to the heat of the season, and surmounts most surprising obstacles to attain its object; having fulfilled which, equal anxiety is displayed to return to the sea. The flies for salmon should be made gaudy and large; this fish is particularly fond of the horse-leech fly. In imitating this fly, behind each wing whip the body of the fly with gold or silver twist. *Editor.*

Salmon Leaps.—Professor Agassiz observes: The caudal, or tail fin, is attached to a very fleshy root, and is moved by powerful muscles. This elastic fin to these fish is a most powerful lever;

when wishing to leap so great a height, they strike the surface of the water with a kind of double stroke; by this means they overcome obstacles which appear insurmountable. One cause of the salmon's return to fresh water is from a parasitic insect, called *lernæa salmonea*, which adheres to their scales, and appears to cause an intolerable irritation. This species of louse dies soon after the salmon has been two or three days in fresh water. *Angler in Ireland.*

The salmon fisheries are constant and copious sources of human food. They rank next to agriculture. Their increase does not lessen other articles of human sustenance. *Marshal.*

The salmon fisheries of Scotland were of great value, but they have for the last twelve or fifteen years decreased. They were, however, let to tenants, and much over-fished; so much so, that the late Duke of Sutherland took them into his own possession, built extensive curing-houses, preserved the rivers during close time, and so regulated the fishing that free access was given to the heavy or breeding-fish, and the kelts, or spawned fish, were allowed to return unmolested to the sea. The consequence of this good management is, that in some rivers the produce has been doubled. It is a mistaken opinion that the spawning season is only between October and

February; in many rivers it would commence in August, if the grounds and entrances were left unmolested. In Sweden the salmon spawn in the middle of summer. The seasons also have much influence. In the North of Scotland, the common earth-worm are a deadly bait for a clean salmon; sand eels are also used for baits; and in the *Transactions of the Royal Edinburgh Society*, the food of salmon has been examined from their stomachs, when taken from the sea, and said to contain small monoculi, and entomostraced with the ova of starfish. Common salmon are said to feed on small fish, and various small marine animals.—*Sir William Jardine on the Common Salmon, Edin. New Phil. Journal.*

Angling for Salmon is not more a masculine than a delightful sport, and is pursued with ardour and success in the northern rivers of our island. Some very spirited and lively sketches on this subject are to be seen in *Blackwood's Magazine, No.* 208—209, 1833. Whilst fishing in Loch Awe, amongst other sport, is mentioned, catching a salmon of twenty-eight pound weight. Loch Awe seems to be a delightful place, and good accommodation there for brothers of the angle. The disciple of Walton who has once indulged in salmon fishing, will feel little satisfaction in the more common pursuits and lesser pleasures of the gentle art. But it requires an expert practitioner

to insure success, as may be seen by the following anecdote:—

When the fish has taken the fly, to pull a hard strain on the line would snap the tackle to pieces, even were it made of wire; ease your hand, and let him rise; take leisure, give him line, but do not slack too fast, and in half-an-hour thou layest him on the bank. *Sir Walter Scott.*

Salmon Fishing with Spear.—The salmon is caught with a spear, which they dart at him as he swims on the surface of the water. It is customary also to catch him with a candle and lantern, or wisp of straw set on fire; for the fish naturally following the light, are struck with the spear, or taken in a net spread for that purpose, and lifted with a sudden jerk from the bottom. Some few years ago, there were taken in the Tweed seven hundred fish at one hawl, but from fifty to one hundred is frequent.

Encyclopædia Londinensis.

Hunting Salmon.—Hunting fish on horseback seems a somewhat surprising sport; yet this mode has been adopted on the shallows at Whitehaven, with considerable success. Taking advantage of the retiring tide, persons have thus got between the salmon and the sea, and have fairly coursed them, until a spear could be accurately thrown:

forty or fifty have thus been hunted in a day. The plan is, after the fish is struck, to turn the horse to the shore. *The Ocean, its Wonders.*

Sir Walter Scott mentions similar sport on the Solway Firth. The rapidity of the salmon's motion is such, that this fish has been known to travel at the rate of sixteen miles an hour.

Wonders in Herefordshire.—Salmon are here in season all the year, and are found in the river Wye. Bone Well, near Richard's Castle, is always full of bones of little fishes, of which it can never be emptied, but that they return again.

Anglorum Speculum, p. 377.

The salmon were so plentiful in the Severn river, that they have been sold for two-pence halfpenny per pound, but now they fetch two shillings, and three and six-pence: they leave their salt water haunts, and are earlier in the Severn, than any other English river. In January, 1833, a very fine fish, nearly a yard in length, was discovered near the shore, close to where the warm water enters the river from the city engine, at the bottom of Newport-street; it was speared and brought into the city, the captor refused a sovereign for it.

Dr. Hasting's Nat. Hist. of Worcestershire.

At Lillingston Lovel two salmon were taken in a small brook, which may be stepped over, (a branch of the Ouse,) one a yard long, and the other a little less. The curious would be glad to know how they came there, near two hundred miles from the sea.—*Plot's Natural History of Oxford.*

The abundance of salmon is so great in the Kamtschatka rivers, as to force the water before them, and dam up the streams so as to make them overflow their banks, and great quantities of salmon are left on the dry ground,—if it was not for violent winds, assisted by the bears and wild dogs feeding on them, the fish left would soon produce a pestilence, their stench is so powerful. *Daniel.*

In the famous cruives, or weirs, for taking salmon in the river Galway, where they are kept until sold, in a large pool supplied with running water, it is a most beautiful spectacle to watch them playing about. *Angler in Ireland.*

By the appellation of white and red fish, the peasantry distinguish the salmon of Goolamore, when in and out of season; indeed, the colour is such a perfect indicative of health, that any person who has frequented a salmon river will, on

seeing a fish rise, tell with accuracy the state of his condition. *Wild Sports of the West.*

The salmon fishery in New Caledonia commences about the middle of July, and ceases in October, this is a busy period for the natives; their method of catching the salmon is ingenious, as practised by the natives of the Columbia river. A certain part of the river is enclosed by stakes about twelve feet high, and extended about thirty feet from the shore; a netting of rods is attached to the stakes, to prevent the salmon running through; a conical machine, called a *vorveau*, is next formed, about eighteen feet long and five broad, and is made of rods about one inch and a quarter asunder, and lashed to hoops with whattaps, a tough fibrous root, used in sewing bark to the canoes, one end is formed like a funnel—to admit the fish, two smaller machines of equal length are joined to it, they are raised a little out of the water, and the salmon, in their ascent, leap into the boot, or broad part of it, and fall into the space, where they are easily killed with spears;—when abundant, the natives take eight or nine hundred daily.

Cox's Columbia, vol. ii. p. 321.

Growth. — The salmon smelts, sprods, and morths, go down the river at Salisbury the beginning of May; the salmon smelts weigh

about three or four ounces, the morth and sprod about three ounces each, the smelts return in seven weeks, and weigh about twelve pounds,—the morths in nine weeks, and weigh about two pounds, the sprods about the same time, and weigh three quarters of a pound. The gentleman who rented the fishery at the time gave the accounts; they were known by a wire passed through some of their back fins, by the fishermen, on going out. *Gent. Mag.*

A salmon taken out on the 7th of March, in the river Mersey, weighed seven pounds; being marked with scissars on the back fins and tail, it was again turned into the river, and being retaken on the 7th March of the following year, it was found to weigh seventeen pounds.

Gent. Mag. vol. lxxxviii. p. 461.

Salmon grows very fast; it is now ascertained that grilse, or young salmon, of from two and a half to three pounds weight, have been sent to the London markets in the month of May, the spawn from which they came having only been deposited in the preceding October or November, and the overtaking three months of the time to quicken. It has also been ascertained by experiment, that a grilse which weighed six pounds, in February, after spawning, has,

on its return from the sea in September, weighed thirteen pounds; and a salmon-fry of April will, in June, weigh four pounds, and in August six pounds. *Gleanings of Natural History.*

At the age of five or six years salmon weighs from ten to twelve pounds; the one represented in *Dr. Block's folio edition* of his *Ichtyology*, weighed forty pounds; it is taken in Sweden at eighty pounds weight; at Denis, in New France, it was seen six feet long.

The much agitated question, whether whitings or herlings are young salmon, or a distinct species of fish, seems to be set at rest by a decisive and well authenticated experiment: in May, 1820, Mr. Relph, and Mr. John Barnes, marked one thousand six hundred and fifteen fry, by taking off the dead fin, and returned them to their native element. In the ensuing season many of them were recaptured as whitings; in the second as sea-trout and grilse; and on Tuesday night week a fine salmon, weighing ten pounds, so marked, was caught at Stainton, and has been seen by a great number of persons: it was exhibited at the public office on Wednesday week. Those who have maintained a contrary doctrine must now, we think, give up their opinion. *Chester Chron.*

The growth of this fish (says *Buffon*) is so extraordinary, that a young salmon caught at Warrington, weighing seven pounds on the 7th of February, was marked on the back fin, and retaken the year following, when it weighed seventeen pounds and a half.

Salmon's Eggs growing in a Dunghill.—A few years ago, my informant says that he, with two more, caught two salmon in rather a poaching way; one of the fish weighed six pounds, which they gave to their assistant; the other was a very large fish of about twenty pounds weight, both apparently in high and seasonable condition. He and his companion kept the large fish, and divided it; the head part happened to fall to his share; the fish was a female, and had a great quantity of pea, but they were not in a very forward state, being about the size of swan shot. The next day his wife boiled part of this fish for their dinner, but it was not eatable; it looked like glue; the appearance was enough to turn a man's stomach; and it was, of course, thrown away. He was then convinced that the fish was out of season; this was in the month of September; and he immediately buried what remained, the fish and the pea, in his dunghill. About two months afterwards, he sold the heap of dung to a person of the town,

who sent a man with a horse to carry it into his field for manure. By the time this man had dug a little way into the heap of dung, the fellow began to hop and caper about, crying, "Snakes' eggs! snakes' eggs!"—and laid about him in all directions with his shovel, to crush and destroy them. He had himself no idea but that they really were the eggs of this reptile, which it is well known deposits them in dung-hills; but presently after, the head of the salmon and the back-bone made their appearance. These eggs were full as large as the top of a man's finger; they must, then, have grown there to that size, from the bigness of swan-shot; from what causes it must be conjectured. It is to be lamented that here the fact ends, and that an examination of some of the eggs had not taken place. Still it must appear very wonderful to every one, that the pea of the fish, under such circumstances, should have retained life for such a length of time, and have grown so very considerably. The only inferences which I draw from this fact are, first, that the eggs continue to grow after they are laid, and until they are vivified by the heat of the sun; and, secondly, that they attain a size equal to the production of a fish three inches in length. I need not add, that they are very little larger than this when we become first acquainted with them in the character

and under the name of fry, and see them making the best of their way down the rivers towards the sea."

A postscript adds—"They were about the 'size of a magpie's eggs;' of a reddish colour; not oval, but perfectly round: in number a great many hundreds."

High Price of Thames Salmon.—The Thames produces salmon (though not in abundance) which are generally taken about Isleworth,—these fetch a most extravagant price in the London markets, having been sold at 12*s.* per pound; 8*s.* and 10*s.* 6*d.* per pound are frequently given for the whole fish. *Daniel's Rural Sports.*

The *Rev. Mr. Waring, of Isleworth,* having tired, and brought to the top of the water, a fine salmon, and being on the point of taking it into the punt, another large fish was observed to be following close after it, and apparently attached to it, but so intent upon the pursuit of the hooked one was he, that they procured a landing hook, and without any resistance he allowed the hook to be inserted under his gill, and was thus securely taken. Upon examination it was found the first was a female, and the second a male fish, and doubtless, as this happened during the spawning season, the female was about to deposit her

eggs, and the male fish was following to ensure the propagation of the species.

Sporting Mag. June, 1835.

The largest salmon *Mr. Pennant* ever heard of weighed seventy-four pounds; in 1795, one was brought to Billingsgate, which weighed within a few ounces of seventy pounds, and was the largest ever brought there; it was bought by a fishmonger, and sold by him at one shilling per pound. One taken near Shrewsbury, in 1757, weighed thirty-seven pounds, and is recorded in the British Chronologist; many have been taken with the fly weighing forty pounds.

Johnson's Sportsman's Cyclopædia.

A fish of sixty pounds weight was caught a few years ago in the Wye, by *T. Evans, Esq.* and presented to the Duke of Beaufort.

They have been taken in the Tay about seventy pounds weight, in the Tweed and Clyde between fifty and sixty pounds; in America they seldom exceed seventeen pounds, indeed every river has its distinct fish, as evidently as the variety of our beeves and horses.

Hansard's Trout and Salmon Fishing.

Mr. Bainbridge, in his "Fly Fisher's Guide," observes: In trout fishing, when salmon frequent

the streams, it is necessary to use stronger tackle than might otherwise be advisable. An instance of the utility of this precaution occurred to the author.—In one morning's fishing, five salmon rose at his trout flies, two of which he succeeded in taking; the largest weighed sixteen pounds and three quarters, and measured two feet nine inches.

If the back be blue or inclining to black, the fish is in season, but if reddish, approaching to brown, it is kepper and good for nothing.

Bainbridge's Fly Fisher.

There are great quantities of white salmon in the Volga; they retire up the river to spawn, from January to June: they are from twenty to thirty pounds in weight, and from three to four feet long. *Pallas' Voyage.*

Killarney Method of cooking Salmon.—The salmon, as soon as caught, to be cut into slices, which are split, and a strong skewer of arbutus run through each, as close to the skin as possible; these skewers are then stuck upright in a sod of turf before a clear wood fire, and constantly turned and basted with salt and water,—the fish, when sufficiently roasted, is served up on the skewers, which are supposed to communicate a peculiar aromatic flavour—this method of dressing salmon is decidedly better than any other.

Angler in Ireland.

The Salmon and Silver Spoon.—A gentleman of Uleaborg going by sea to Stockholm, dropped a silver spoon into the water, which was swallowed by a salmon, carried in his belly to Uleaborg, where the fish was accidentally bought by the gentleman's wife, who immediately concluded, on seeing the spoon, that her husband was shipwrecked; he returned, however, in time to prevent any ill consequences. *Acerbi's Travels.*

Salmon Paste, or Roe.—A very dear article, sold at Liverpool; seems very attractive. Salmon, trout, eels, are taken by it. *Walton*, *Daniel*, *Barker*, &c. &c. mention it.

Curious occurrence.— Sunday afternoon, between five and six o'clock, several individuals who were standing on the shore beneath the cliffs opposite New Brighton, observed a singular appearance on the water near the mouth of the river. On looking more intently, they discovered that the surface, as far as the organs of vision could extend, was literally alive with an immense shoal of porpoises, which were rolling forward with the most rapacious rapidity, in pursuit of, apparently, a not less numerous flock of salmon. The latter, in their terror, and to avoid their assailants, kept continually leaping from the water, and, as their dripping scales glittered in the bright rays of the sun, added an indescribable

interest to a scene at once so curious and uncommon; the chase was continued up the river until distance hid both the salmon and their pursuers from the ken of the spectators.

Liverpool Advertiser, June, 1833.

The very marvellous event related by Bourne and others concerning Mr. Anderson, an alderman of Newcastle, dropping his ring by accident, over the Tyne bridge, as he was fingering it, is supposed to have happened about the year 1559. The part of the story which some have ventured to doubt of, is, that the identical ring was brought back again, after some time, in a fish bought in Newcastle market by a servant of the above merchant, and most unexpectedly restored to its owner. The ring is at present, 1783, in the possession of Mr. Edward Anderson, a relative, who permitted a drawing to be taken of it. On the inside of the ring is the picture of a salmon, in commemoration of this event. *Vox Piscis*, or the Book of Fish, 1627, mentions this ring in page 13. *Brand's Newcastle*, vol. i. p. 47.

The principal fish taken in the river Wye are the salmon, which are in perfection between the months of December and August; and of so much consequence was the abundance of this fish, that in the indentures of apprenticeship in the town of Hereford, it was stipulated that the apprentices

should not be obliged to live upon them more than two days in the week.

Riding from the Giant's Causeway, we forded the river Bush, near the sea, and went down to see some men land their nets; as soon as the dog perceived the men to move, he instantly ran down to the middle of the river of his own accord, and there he took his post; we were at a loss to know his intention, but as soon as they began to empty their nets, the salmon endeavoured to escape, and the dog immediately pursued them; but one had the advantage of the dog, who found swimming of no use to him, he ran to a shallow part of the river to stop the fish, but it escaped; he then returned to his old post.—*Hamilton's Letters on the Coast of Antrim.*

Eagles are constantly discovered watching the fords in the spawning season, and are seen to seize and carry off the fish. Some years since, a herdsman, on a very sultry day in July, observed an eagle posted on a bank which overhung a pool; presently, the bird stooped, and seized a salmon, and a violent struggle ensued; when the herdsman reached the spot, he found the eagle pulled under the water by the salmon, and drenched his plumage, which disabled him to extricate himself. With a stone the peasant broke the pinion of the eagle, and actually se-

cured the spoiler and his victim, for he found the salmon dying in his grasp.

Wild Sports of the West.

THE TROUT

Is a noble and generous fish, and affords the angler a superior kind of sport, being what is termed a game fish.

Trout delight in foaming streams occasioned by waterfalls, or in rapid eddies, and mill-dams, where other fish are not generally found. In such situations you see them even leaping out of the water, and sporting about; thus it may truly be said to "delight in troubled water." Their food is gained from the air, as well as from their native element; at one time they are taken by imitating the fly that hovers over the surface, and at another, by sinking the worm or grub to the depth below. Trout are naturally voracious.

Editor.

The favourite haunts in which the trout delights, are the junction of two streams, tails of

currents, below bridges, near old weirs, and pieces of rock, roots of trees. *Bainbridge, Fly-Fisher.*

Catching trout, native tact.—A friend with whom I frequently spent days together in angling excursions, retired from London to reside at Hexham, and had a good assortment of the best London-drest flies, rod, &c. This gentleman remarked that the native fishers, by a knowledge of favourable localities, seasonable weather, and observation of the fly on the water, would kill trout with the coarsest tackle, and flies equally coarse, but of the true shape and colour, when *he* has hardly obtained a rise. *Editor.*

In March trout begin to rise, and blood worms appear in the water. The large hair worm is found at the bottom of drains; the water-flea on the surface of sheltered pools.

When angling near Uxbridge, some years back, with a fine rod, and single hair line, baited with a red worm, I left my rod on the bank, whilst I went to examine the river, and on my return I found I had taken a gudgeon; in a few minutes it was seized by a large trout which, after playing it a considerable time, I landed a very fine fish. *Editor.*

Mr. Oliver does not appear to think any thing of examining the stomach of a trout, but to con-

tinue to fish with the fly you have succeeded with. "I have often known a red hackle, or a dun fly, take trouts, when they would not look at either the artificial or the natural May-fly, though hundreds of the latter were at the same time skimming on the surface of the water; and that no directions are better for fly-fishing than the following rhyme:—

"A brown red fly, at morning grey,
A darker dun in clearer day;
When summer rains have swelled the flood,
The hackle red and worm are good;
At eve, when twilight shades prevail,
Try the hackle white and snail;
Be mindful aye your fly to throw
Light as falls the flaky snow."

When trout are in perfect season, they are thickly studded with black and red spots, which, relieved by the dark olive of the back, gradually mixing with the deep yellow of its side and belly, produce a fine effect: at this time it is hog-backed, like most other fish. The variety and colour of trout, such as red, yellow, and white, arises from the quality of food, or the water which they inhabit, being impregnated with some substance capable of producing this effect. Certain it is, their haunts, voracity, and modes of feeding, are every where alike. *Bainbridge's Fly-Fisher.*

We have dragged out fine trout as fast as we could throw our line, when the fly, from their incessant biting, was reduced to the bare hook, and the hackle feather fastened merely at the shank. A very favourite and successful practice of ours was to fish in a part of the river where others seldom thought of, in the *dead still water*, imitating a drowned fly, and using very fine tackle: here we have filled our baskets with the best trout, whilst others have thrashed the stream in vain.—*Editors of the Literary Gazette, July*, 1834.

The best and largest trout are taken at night, and dibbed for with a strong line. Throw the bait across the surface, and draw it towards you, keeping out of sight: no lead is to be used.

Mayer's British Sportsman.

A trout, weighing fifteen pounds, was received by A. Blandy, Esq. of Wall, near Lichfield, which was caught on his estate in Oxfordshire, in the Isis. The beauty and proportion of the fish were as remarkable as its extreme size; measuring in length thirty inches and a half; over the shoulders, seventeen inches and three quarters; extreme breadth, eighteen inches and three quarters; at the tail end under the fin, nine inches and a half.—*Evening Paper.* This is certainly a large size for an English trout, but the trouts in

Geneva sometimes weigh from forty to fifty pounds.

Captain Heaviside, of *Egham Hythe*, fishing for perch, with a paternoster, at the old bridge of Staines, on Saturday, January 26th, 1833, hooked a heavy fish, which he conceived at first to be a jack, but he was soon undeceived: it proved to be a fine trout, about eight pounds weight, and in the best condition, being as bright as silver, and cut a beautiful colour; bait, live gudgeon; hook No. 6; measured two feet two inches in length, and one foot two inches in girth. This is a remarkable thing so early in the season, and is a proof of the mildness of the winter.

On Saturday morning, May 31, 1834, a trout, in the highest season, and of an extraordinary size, weighing fourteen pounds, was caught with the rod and line, by Lieut. General *Sir Samuel Hawker*, while angling in the Thames, near Richmond, and afterwards presented to his Majesty.

Sunday Times, June 15, 1834.

Mr. Tomkins, of *Polgaron*, put some river trout, of two inches and a half in length, into a newly-made pond. He took some out the second year, about twelve inches in length; third, sixteen; fourth, twenty-five.

Carew's Survey of Cornwall.

Longevity of Trout.—Mr. W. Hossop, of Bond Hall, Furness, placed a small fellbeck trout, about fifty-three years ago, when a boy, into a well in the orchard belonging to his family, where it remained ever since, till last week, when it died, not through sickness or infirmity, but for want of its natural element, water, the severe drought drying up the spring that supplied the well. His lips and gills were perfectly white ; he regularly came to be fed by his master's hand when called by the name of Ned. *Westmoreland Advertiser*, 1834.

The grey trout in *Ulswater* have reached fifty or sixty pounds ; lightish grey, with very small spots. One caught in 1812, at Cottishall, in Norfolk, was thirty-nine inches long, and weighed sixteen pounds ; one caught in the Stour, 1797, weighed twenty-six pounds. *New Monthly Mag.*

Whilst *Captain Medwin* was fishing in a mill-dam, his friend hooked a trout which proved too strong for his tackle, and he lost it : five minutes after the Captain found himself violently tugged, and succeeded in landing a trout of three pounds, with the identical hook and tackle of his companion in its mouth. *Angler.*

Trout are taken in a river in Cardiganshire, the back bones of which are crooked.

Phil. Trans. Art. xxiii. 1767.

Salmon Trout.—This species has a phosphoric property, which distinguishes it from many other. *Dr. Block* says, he saw one evening a light accruing from the head of a salmon-trout; its eyes, tongue, palate, and fins, spread a very great light, which much increased when it was touched with the finger, and which conveyed to another part of the trout the same phosphoric appearance.

About forty years ago a trout was caught in the Thames, near Hampton, which measured two feet nine inches. *Hansard's Trout Fishing.*

Trout of a particular species are taken in Ulleswater, to the weight of thirty pounds, also eels of a large size, and guiniads in large quantities.

They are said to weigh thirty pounds in the lakes of Cumberland,—a salmon was taken in the river Kennel that measured forty-five inches, and one was taken of late years at Hampton that measured thirty-nine inches. *Donovan,* p. 85.

Gillaroo Trout.—The peculiarity of this trout is, that its stomach very much resembles the gizzard of a bird gillaroo (being the name for a gizzard), where in most of the loughs in Ireland these fish are to be found.

Gent. Mag. xliv. 530.

Lord George Cavendish ordered the river that runs through his park, at Latimer, in Bucks, to be drawn off in 1776, and drew from it five hundred brace of trout, weighing, on an average, one pound each.

Trout Fishing in Scotland. — Last week the game-keeper at Haughton killed, with a rod and line, in the Don, a common river trout, which weighed eleven pounds, and measured in girth seventeen inches, the largest trout probably ever caught in the river.

Aberdeen Journal, Sept. 1833.

There is a fine trout stream, river *Ython*, near Ellan, where a small inn is kept by *Mrs. Cowie*, whose son is an excellent fisher, who will give every information; the writer appears to have had most delightful sport, one trout twenty-one inches long; this village is only sixteen miles from Aberdeen; the water belongs to Lord Aberdeen, but his agent, *Mr. Blachie*, is very obliging in readily granting permission to those who apply to him.

Fly-Fishing — Ballater. — This delightful place, on the banks of the Don, is the favourite resort of the Aberdonians; it is about forty miles from Aberdeen, near which Byron spent some of his youthful days. During the months of June, July, and August, it is the resort of the

gentry; and crowded with visitors, laying in a new stock of health amid the mountain breezes. Lodgings in the village are in very great request; the quantity of finnoch and salmon killed there in the season by fly-fishing is very great.

New Sporting Mag. July.

The *New Sporting Magazine* for July, 1834, observes that a *Dr. Robertson*, supposed to be one of the best fishers in the county, took, in August, 1833, at Ballater, in one day, (in a small loch, and adjoining the stream,) thirty-six dozen of trout, and a friend killed, on the same day, twenty-five dozen; these were all about the size of a herring, the trout will seldom exceed this size in the small mountain streams.

Dr. Davy remarked, in one of his lectures at the Royal Institution, that those trout were the best which frequent waters flowing over *calcareous soil*,—he accounted for this matter on philosophical principles, and the truth of his theory is fully confirmed by the superiority of Irish trout, the beds of many of the rivers consisting entirely of limestone.

Mr. Pakenham let his fishery at *Ballyshannon* for twelve hundred pounds per year; in 1808, the fish was as high as fourteen pence per pound. In Lough Erne trout increase in size so wonderfully,

that some young ones, which were caught and marked, were supposed to have increased one pound per week. *Sup. Daniel's Sports.*

Extraordinary Circumstance.—A gentleman lately bought at a fishmonger's in Perth, a few pounds of small sized trout, in cleaning which, the servant discovered in one of them, a hard substance, which turned out to be the whole of a teat of a cow: the trout was of the yellow kind, and measured only fourteen inches in length.

Scotchman, Sept. 1833.

It is not an uncommon circumstance for persons residing in the country, to place *trout in their wells;* they find them very useful in destroying insects, and keeping the water pure. About eight years ago a trout three inches in length, was put into a well at Delnashaugh, and it is now fully eighteen inches in length, and so tame that it will eat out of the hand of any person that will hold out food for it.—*Elgin Courier.*

Trout Lakes of Inchiquin.—The trout in these lakes are very fine, and of two kinds, red and white; the latter, when hooked, will often spring a great height out of the water. One trout killed here was unusually thick, deep, silvery, and bore the colour and shape of a salmon; it weighed ten pounds and a half. *Angler in Ireland.*

In fly-fishing for large white trout (*Sewin*) in Ireland, the angler should use good strong gut for the bottom, for the trout are very strong, and yield noble sport, and may be known on being hooked; they immediately leap out of the water. It is very necessary to wind up hastily, and retreat quickly backwards, for they are apt to run towards you, and if once allowed a slack line, they most likely get away.—*Hansard's Trout Fishing.*

Mr. Johnson, who is the principal inhabitant of *St. Mary's Falls*, Columbia River, informed us that fish was in great abundance there, particularly trout, of the enormous size of sixty pounds. He also assured me he saw one caught in Lake Superior, which weighed ninety pounds.

Cox's Columbia River, vol. ii. p. 265.

To preserve trout alive whilst carrying them a long distance, mix one ounce of white sugar candy, a piece of saltpetre, about the size of a walnut, and a table spoonful of flour together; this will be sufficient for a pail of spring water, and must be often repeated to keep the fish alive.

Mayer's Sportsman's Directory.

The best way to dress a trout is by plain boiling, the very day it is caught, with sauce composed of catsup, cavice, and boiled anchovies.

New Monthly Mag. 1820.

MEMORANDA OF FISHING IN IRELAND.

The whole of the western coast affords more or less, most excellent fishing, and the eastern coast, the contrary. The following places in the annexed list are very good, which the number of fish, and weight, will testify, being taken by the angler in Ireland.

Place.	*Number.*	*Weight.*
Marfield Pond	17 trout	7 lbs.
River Anner	17 ditto	
—— Shannon	8 ditto	
Lough Derg	42 pike & perch	65
Inchiquin Lake	19 trout	
Costello River	65 ditto	108
Lough and River Carragh	10 trout	
Blackwater River	29 ditto	
Ballyshannon	6 salmon	85
Ballina	10 ditto	48
Ballinahinch	7 ditto	43
Lough Luggen	76 trout	
—— Screeb	17 ditto	
——	2 salmon	
Killarney Lake	3 ditto	15
Lough Kittana	5 trout	
—— Currane	22 ditto	

"If you are fond of fly-fishing, go to Ireland, take with you only a mind free from party spirit, and a soul capable of appreciating nature and

men; open your eyes to the scenes of loveliness that will greet you, and your heart to the kindness and goodness you will experience, and you will be highly gratified. Whatever party spirit may be going on, *strangers* are never molested. The *Angler in Ireland*, which will be found a very acceptable book to any angler intending to go to the sister country for that recreation: it contains great information relating to artificial flies, good inns, boatmen, names, favourite places," &c. &c.

Memoranda of Fish taken in Wales.—In one year's angling, from 11th April, 1753, to 10th April, 1754 (suppose all trout)..... 6272

Ditto, April to October, 1754	3758
1756	3739
1757	9272
1758	7762
1759	3490
1760	2150
1761	2522
1762	3183
1763	3158
1764	1814

The whole given to the public; the rich, the poor, the sick, the healthy..... 47,120

*** Some pike and chub, eels and flounders, were also taken, not noticed in the above account.

Hansard's Trout Fishing.

Woodcock caught when fishing for a trout.—James Holmes, of Pennybridge, Lancaster, tanner, in throwing a jack-fly, caught a woodcock, which a springer dog had put up; the bird happened to take its flight the instant Holmes was throwing his line, and was hooked by the wing; Mr. Holmes kept the bird some time.—*Cumberland Packet.*

The *sensibility of the trout when hooked may be applied to fish in general.*—The hook usually is fixed on the cartilaginous part of the mouth, where there are no nerves, and cold-blooded animals in general are less sensitive than those of warm-blooded animals; and a proof that the sufferings of a hooked fish cannot be great, is found in the circumstance, that though a trout has been hooked and played with some minutes, he will often, after his escape, with the artificial fly in his mouth, take the natural fly, and feed as if nothing had happened. *Salmonia.*

Captain Medwin was of the same opinion about the sensibility of fish when hooked.

O'Shaughnessy's Limerick hooks.—The present vender of these famous hooks is a watchmaker, he is no relation to the old man, but is a good fisherman, and keeps good tackle; he employs a clever young man, who makes hooks after the original pattern, and ties flies well.

The most successful fly, every where, was the deep orange silk body, with broad gold tinsel, rich mixed wings, and macaw horns.

Angler in Ireland.

Trout Fishing Anecdote.—"As Walter was thus meditating, he arrived at the banks of the little brooklet, and was awakened from his reverie by the sound of his own name. He started, and saw the old Corporal seated on the stump of a tree, and busily employed in fixing to his line the mimic likeness of what anglers, and, for aught we know, the rest of the world, call the 'violet fly.'

"'Ha! master,—at my day's work, you see: fit for nothing else now. When a musket's half worn out, schoolboys buy it—pop it at sparrows. I be like the musket: but never mind—have not seen the world for nothing. We get reconciled to all things: that's my way—(laugh)! Now, Sir, you shall watch me catch the finest trout you have seen this summer: know where he lies—under the bush yonder. Whi—sh! Sir, whi—sh!'

"The Corporal now gave his warrior soul up to the due guidance of the violet-fly: now he whipped it lightly on the wave; now he slid it coquettishly along the surface; now it floated, like an unconscious beauty, carelessly with the tide; and now, like an artful prude, it affected

to loiter by the way, or to steal into designing obscurity, under the shade of some overhanging bank. But none of these manœuvres captivated the wary old trout, on whose acquisition the Corporal had set his heart; and what was especially provoking, the angler could see distinctly the dark outline of the intended victim, as it lay at the bottom.

"The Corporal waited till he could no longer blind himself to the displeasing fact, that the violet-fly was wholly inefficacious; he then drew up his line, and replaced the contemned beauty of the violet-fly, with the novel attractions of the yellow-dun.

"'Now, Sir!' whispered he, lifting up his finger, and nodding sagaciously to Walter. Softly dropped the yellow-dun upon the water, and swiftly did it glide before the gaze of the latent trout; and now the trout seemed aroused from his apathy, behold he moved forward, balancing himself on his fins; now he slowly ascended towards the surface; you might see all the speckles of his coat; the Corporal's heart stood still, he is now at a convenient distance from the yellow-dun; lo, he surveys it steadfastly; he ponders, he see-saws himself to and fro. The yellow-dun sails away in affected indifference, that indifference whets the appetite of the hesitating gazer, he darts forward; he is opposite the yellow-dun — he pushes his nose

against it with an eager rudeness,—he—no, he does *not* bite, he recoils, he gazes again with surprise and suspicion on the little charmer; he fades back slowly into the deeper water, and then suddenly turning his tail towards the disappointed bait, he makes off as fast as he can,---yonder,---yonder,---and disappears! No, that's he, leaping yonder from the wave; Jupiter! what a noble fellow! What leeps he at---a real fly---'Damn his eyes!' growled the Corporal.

"'You might have caught him with a minnow,' said Walter, speaking for the first time.

"'Minnow!' repeated the Corporal gruffly, 'ask your honour's pardon. Minnow!---I have fished with the yellow-dun these twenty years, and never knew it fail before. Minnow!---baugh! But ask pardon; your honour is very welcome to fish with a minnow if you please it.'

"'Thank you, Bunting. And pray what sport have you had to-day?'

"'Oh,---good, good,' quoth the Corporal, snatching up his basket and closing the cover, lest the young Squire should pry into it. No man is more tenacious of his secrets than your true angler. 'Sent the best home two hours ago; one weighed three pounds, on the faith of a man; indeed, I'm satisfied now; time to give up;' and the Corporal began to disjoint his rod. 'Sir,' said he, with a half sigh, 'a pretty river this, don't mean to say it is not; but the river Lea for my

money. You know the Lea?---not a morning's walk from Lunnun. Mary Gibson, my first sweetheart, lived by the bridge,---caught such a trout there by the by!---had beautiful eyes---black, round as a cherry---five feet eight without shoes ---might have listed in the forty-second.'"

Bulwer's Eugene Aram, 1832.

The Welsh Coracle Trackle, or Fishing Boat.—They are constructed of willow twigs, in the manner of basket work, and are covered with a raw hide, or canvas, pitched in such a manner as to be water-proof; they are generally five feet and a half long, and four broad, their bottom is a little rounded, and their shape resembles the half of a walnut-shell, a seat across the centre, towards the broad end. The angler paddles with one hand, and casts his flies with the other, and when his work is finished brings his boat home on his back. They are used in fly-fishing, for grayling as well as trout.

Hansard's Trout Fishing.

Mill-Burnfoot Trout.---At Thankerton, 1811, in the river Clyde, might be seen at the top of the bridge, when the water was transparent, a trout, which had been an inhabitant of these places twenty years, and had also eluded every artifice the ingenuity of sportsmen had devised to catch

him,—he obtained his name from the part of the water he usually inhabited.

Daniel's Sports, Sup.

GRAYLING.

They are found in the Humber, the Wye, and the Severn,—in this last place the best method of fishing for them is in a coracle, as described page 62. The grayling is very similar in his haunts to the trout, delights in rapid and clear streams, they rise more boldly and freely, than the trout, feed upon the same sort of flies, and take gentles, in pursuit of which they are very sportive, and determined; if missed, they will pursue, and attempt to take the same fly,—though, when taken they are very inanimate. Lapland is said to be most plentifully supplied with this fish.

Editor.

The grayling is longer, and not so round as the trout, it seldom exceeds sixteen inches, has no teeth, but the lips are like a file; when in season,

the back is of a dark colour, and the sides grey: for flavour they are preferred to the trout, they are in season in winter; the haunts of the grayling and trout are the same. After the angler has hooked his fish, the greatest caution is required to prevent the barb breaking its hold.

Bainbridge's Fly Fisher.

Mr. Franks says, the Umber, or grayling, is an amorous fish, that loves his life; his mouth waters after every wasp, as his fins flutter after every fly: for, if it be but a fly, or the produce of an insect, out of a generous curiosity, he is ready to entertain it, smooth and swift streams enamour him, but not a torrent; yet, for this fly-admirer there is another bait, the munket, or sea-green-grub, generated amongst owlder trees, also issues from willows, sallow, &c. &c. fish him finely, for he loves curiosity, neat and slender tackle, and lady-like; you must touch him gently, for he is tender about the chaps, a brandling will entice him from the bottom, and a gilt-tail will invite him ashore—*Hansard's Trout Fishing.*

Walton says, the largest graylings are eighteen inches in length; *Mr. Pennant* asserts that one was taken at Ludlow, that was half a yard long, and weighed four pounds six ounces.

Donovan, p. lxxxviii.

Fishing one day for grayling with an artificial fly, made to a single hair, and a fine line to a slender rod, I rose and hooked a large fish; he now began to run very hard, for I had risen him over some willows, and I had no winch to give him line, which made me fearful of losing my fish, and part of my line; he next took a turn down the stream, which enabled me to extricate myself from the willows. I leaped a large ditch, keeping my fish in full play; my diversion became highly pleasing, the contest lasted full twenty minutes, when he fairly gave it up, and, retreating with caution, brought him flat on some gravel, it proved to be a fine grayling, weighing five pounds. *Taylor's Angling.*

Ludlow appears the head quarters, before they set off, in April, for the principality. The public conveyances begin to move to the watering places. The Terme, the Corve, the Clun, and the Onny are the principal streams in the immediate neighbourhood of Ludlow. The grayling here appears brisk and frolicsome, swimming in the middle of the water. The Terme bears the palm for the grayling; the Corve for the most delicious pink trout, and fine eels, chub, &c. &c. The sportsman's localities are every where at his command in the vicinity of Oakley Park, through the great liberality of the proprietor, the Hon. R. H. Clive. *Sporting Mag. April,* 1835.

There is a river called the *Grand Eau*, which falls into the Bex, in the Valois. We have taken an immense number of grayling where the two streams meet; we hooked large fish at every throw. In August, flies are a light dun and coch-y-bondy; it is a place worth the whole journey from England. For further particulars see *Hansard's Trout Fishing in Wales*, an excellent practical work, with great variety of flies, natural and artificial, stations, fishermen, &c. and with a vocabulary of the Welsh language.

GUINIAD.

There is a fish in Bala Lake, called gwyniad. It is the same fish as is named sewin in the north; it is taken with trout flies, shows tolerable sport, and is very nimble in its movements; it is also a native of the lakes of Cumberland.

Sporting Mag. August, 1829.

THE CHARR.

The most successful mode of catching the charr in the lake of Windermere, in the early summer months, is by fastening a long and heavy leaded line and hook, baited with a minnow, to the stern of a boat, which is slowly and silently rowed along. When in season, they are a strong and vigorous fish, and afford the angler excel-

lent sport. They are caught also in Connington Mere, in Lancashire.—*Mag. Nat. Hist.* vol. v.

The charr that are found in Ireland, in Loughs Neagh, and Esk, and Lough Egish, in Fermanagh, and Wicklow lakes, are about twelve inches long. This fish appears to be in many of the northern lochs, but is only taken in the spawning season, when coming to the mouth of the rivulet. They reach a considerable size; they are a night-feeding fish, and feed near the bottom.

William Jardine.

THE PARR.

Among the British salmonidæ, there is no fish the habits of which are so regular, or the colours and markings so constant, as those of this small fish. It frequents the clearest streams, delights in the shallower fords or heads of streams having a fine gravelly bottom, and hangs there in shoals in constant activity, night and day. It inhabits those rivers that have an uninterrupted intercourse with the sea. It takes any bait, at any time, with the greatest freedom, and hundreds may be caught when no trout will rise, though abundant among them. In the markings they are so distinct as to be at once separated from the trout.—*Sir W. Jardine on the Parr, Edinburgh New Philosophical Journal.*

There is not the least doubt but parr are the young of salmon. *Mr. Hogg and Mr. Stoddart.*

THE SHAD.

The shad arrives in the Thames in the latter end of May, or early in June, and is a very coarse fish.

A shad was taken in the Ouse one foot eleven inches long; it is like the salmon, gregarious, and lives partly in the sea.

The Severn shad is esteemed a very delicate fish; about the time of its first appearance, in April or May, it sells dearer than salmon.

Pennant.

When this fish leaves the sea, it is very poor, and of bad taste; but as soon as it goes up the rivers, it fattens and becomes as large as salmon. In Prussia it is smoke-dried, and sold to the Arabians, who eat it with dates.

The shad in Hudson's River is from thirteen to nineteen inches long, and on an average, before dressing, weighs five pounds. This fish is caught in many rivers in France, and the weight, in general, is from five to eight pounds. In the Seine they are very fat, and weigh from eight to ten pounds. *Du Hamel.*

In Germany, they have a peculiar manner in taking this fish; the fishermen have an idea that it is terrified by storms, that it loves quiet, and is delighted with the sound of music. They therefore seek the most retired places to spread their nets, to those nets they fasten bells in such a manner as to chime in harmony when the nets are moved; the fish will not attempt to escape when attracted by the sound to the snare, and is easily taken.

Donovan, p. 58.

THE SILVER SHAD.

This fish grows to the length of twelve or fourteen inches, and is large in proportion.

Brown's Nat. Hist. of Jamaica.

WHITE BAIT.

Mr. Donovan observes that the white bait most certainly is the genuine offspring of the shad, and that it does not admit of the slightest doubt. It appears Mr. Pennant never saw a white bait, therefore could not be a judge on the subject. It is a matter of consequence that this enquiry, on which there has been so many opinions, should be set at rest.

WHITE BAIT AND SHAD.

That the diminutive fish called the white bait, is the young of the shad, is a point so long considered settled, that it might be thought trea-

son in natural history in giving a different opinion. But there are spots on the sides invariably belonging to the shad, and the white bait has none. Vide plate, Zoological Journal, No. XIV. with several other very material differences, which clearly prove them to be a distinct species of fish. In October, some white bait were caught with the roe in them, besides young ones, also small shad, two inches and a half long, young fishes; shads of four inches are supposed to be two years old.

Zoological Journal, 1828-9.

The naturalist is indebted to the great industry of *Mr. Yarrell* in clearing up this point, which had for many years been considered as doubtful. The Zoological Journal is well worth examining; indefatigable means were used to obtain this information. *Editor.*

SMELTS.

This fish derives its name from its having the smell of a violet or cucumber when fresh. The smelt is a beautiful fish, and is almost transparent: it is likewise very prolific. Smelts arrive in our rivers in November, in the spring, and summer. They are angled for with a paternoster line, and No. 11 or 12 hooks, when the tide is flowing. The best bait is live shrimps, or the tail of boiled ones, gentles and red paste. They are to be found near flood-gates, piers, &c.

Walton mentions, that so many smelts came up the river in his time, that not fewer than 2000 persons became anglers in one day, between London bridge and Greenwich.

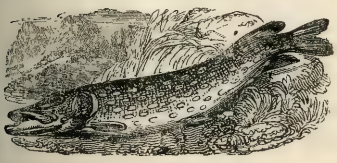
Smelts are to be caught near the lock-gates at Ramsgate, when in season, with hook and line.

Mr. Pennant speaks of one of the largest smelts he had ever heard of, that was thirteen inches in length, and weighed half-a-pound.

The smelts at Monte Video are four-and-twenty inches in length; they are semi-transparent, and a most delicious eating; they are very abundant; may be caught by the hook. They are also to be taken in the Straits of *Magellan*, twenty-nine inches in length, and eight in circumference.

Narborough's Voyage.

PIKE, OR JACK.



These fish frequent still, quiet waters, particularly those with clayey bottoms, thriving more in

these places than in rivers. They may be sought for where aquatic plants abound, under the large leaves of which the trolled bait (gently cast) is seldom refused. They will take almost any kind of live bait, but the best is the gudgeon. Always, in live bait trolling, give the pike time to pouch. Their voracity is such, that they will even seize one another. Jack takes the name of pike when weighing more than four pounds. When trolling in the county of Norfolk, the *Editor* was much surprised to find them in solitary ponds which had been dried up for a season. They were generally the size of mackerel. This remarkable fact was formerly the subject of much surprise; but as the knowledge of natural history advanced, it was ascertained that certain aquatic insects, who subsist on the spawn of fish, in their journeyings from pond to pond, deposit the spawn before its vitality is destroyed, and thus, by a bountiful intention of nature, renew the supply.

*** The contents of this work afford ample instances of this point. *Editor.*

Curious Trimmers for Pike.—These trimmers are so fixed with a natural bait on the hook, by a rather curious contrivance, that whether alive or dead, the fish always remained in a swimming position. *Lloydd's Northern Sports.*

This fish attains to a large size in a shorter time, in proportion to most others: in the course of the first year it grows eight or ten inches; the second, to twelve and fourteen; the third, to eighteen or twenty inches. *Willoughby* speaks of one that weighed thirty-two pounds. *Pennant* heard of one that weighed thirty-five pounds. Another was taken at Dresden which weighed forty-three pounds. *Dr. Brand* saw one seven feet in length taken at Berlin. But these are all greatly inferior in size to those mentioned by Pliny, and other ancient authors.—*Donovan*, p. 109.

Extraordinary Growth of Pike.—Four years ago, some pike were turned into a pond belonging to R. Cartwright, Esq. in Northamptonshire. The largest weighed two and a half pounds. In October last, the pond was let off, and one pike of nineteen pounds, together with five more from eleven to fifteen pounds each. There was a good stock of carp in it when the water was let off.

Mag. Nat. Hist. Nov. 5, 1829.

The rapid growth of some fish is very extraordinary. I saw three pike taken out of a pond in Staffordshire, belonging to the present Sir J. Clark Jervoise, two of which weighed thirty-six pounds each, and the other thirty-five pounds. The pond was fished every seven years, and, supposing that store pike of six or seven pound weight were left

in it, the growth of the pike in question must have been at the rate of four pounds per year.

Jesse's Gleanings of Nat. Hist.

Great Age of Pike.—*Ryacznski* assures us he had seen a pike ninety years old.

Shooting Pike.—Some labourers at work near Godalming, observed, in the river between that town and the village of Hurtmore, a large jack, which approached so near to the bank, that they struck at it with their bills! The fish did not immediately disappear, as might have been expected, but remained within sight, till a gentleman, who was shooting near the spot, and was called by the workmen, arrived at the place, when he shot at it: the fish instantly leaped out of the water, and, as it reached the surface, the gentleman discharged his second barrel at it. The "tyrant of the water" then disappeared for a short time, but the gentleman, having re-loaded his gun, discovered it near him, when he shot it again upon the head. This last shot killed it, and with the assistance of the men he got it out of the water, and had it conveyed to Northbrook Place, the residence of W. Keen, Esq. where it was weighed and measured. It proved to be four feet in length, from the snout to the extremity of the tail, and weighed twenty-four pounds. It was afterwards sent as a present to J. H. Frankland,

Esq. of Eashing House, near Godalming, who has employed a skilful artist in the neighbourhood to preserve and stuff it.

Pike are frequently shot when basking in the sun, by aiming your piece right under them; for there is a great deception in the water, causing the shot to rise when fired into.—*Ency. Lond.*

Hunting and Shooting Pike.—On a fine day, hold a mirror in the sun, so that it reflects on a place where pike are known to be in plenty, which also attracts them to the place, and then fire at them just under water. *Du Hamel.*

Mr. Oliver caught a large pike in the Coquet river, with an artificial frog, and double snap. He refused a small trout. Directly he felt himself pricked, he let him forty yards of line, but not gently. The fish weighed ten pounds, and was two feet seven long; but the most interesting part was, that the fish at one period of the contest had the better of the angler, who fell into the water, having both hands on the rod, and the fish was making off with him. Mr. Oliver was dragged out by his friend.

On our way back from the Lowther, we chanced to look over the bridge, and we observed a pike lolling at his ease, as in his own parlour, with

his mouth open; and, putting a snood over his snout, we wisked him into the upper air like winking, and laid the fourteen incher on the table. *Oliver's Fly Fishing.*

Encouragement to Pike Fishers as an incentive to Trollers, &c.—Of the following instances of killing large pike with hook and line—many are of recent date; they are of particular interest now, as good sport may be obtained at this present time. *Editor.*

At Broadford, near Limerick, a pike was said to be killed, of the astonishing weight of ninety-six pounds. *Angler in Ireland.*

The largest pike ever known to be caught by trolling was by Colonel Thornton, in Loch Pentuliche, it weighed within two ounces of fifty pounds. A fine engraving of this fish is to be seen in *Daniel's Rural Sports.* It took the colonel an hour and a quarter to kill him; and had not he been in a boat, and by that means humoured the fish, it is very probable it would have been lost.

The next large pike was taken by the troll, by *Mr. Bent*, at the pool at Packington; weighed thirty-four pounds.

Mr. Wilson caught a pike in the Driffield canal, near Brigham, which weighed twenty-eight

pounds, and, what was singular, had five pounds of solid fat taken from its inside.—*Rural Sports.*

A remarkably fine pike was lately caught by Mr. R. Evanry, (as he was trolling with a very small line); this fish was of the immense weight of thirty pounds, measuring three feet six inches in length, and one foot ten inches in girth. It is singular, that in 1827, Mr. Evanry caught a small pike, weighing only two pounds, which, after cutting out one joint of the fin, he threw in again. This pike had lost part of the fin, and is therefore supposed to be the identical fish.

Salisbury Guardian, March, 1834.

A Brace of Pike caught by the same Hook and Line at one time, (or 'Killing two Birds with one Stone.')—Two gentlemen were lately perch fishing, with minnows, in a pond belonging to Sir G. Crewe, when a pike, apparently about two pounds, was hooked. The assistance of the angler's friend, who was at some distance from the spot, was required to land the fish; but, before this gentleman could reach the place, the feel of the rod suddenly indicated an additional weight or resistance. When, however, they were enabled to show the fish, he was found seized across the back by a much larger, about ten pounds weight. It now became a matter of consideration how to take both. A stick of some length was hastily cut, and a large treble hook was as speedily attached to it; with this the heavier fish was struck

on the side; but this had only the effect of removing its scales; the second effort was more fortunate; the hook being introduced into the side of the mouth, by a sudden strong lift, the fish were landed, the parties being highly delighted with their success. *Derby Reporter, Sept.* 1833.

Captain Medwin says he saw a pike taken in Gloucestershire, by trolling, weighing eighteen pounds, that had one of four pounds undigested in his stomach, and that fish another in his, of one pound; so that three fish were taken by the same bait.

Pike Fishing Extraordinary.—Between Henley and Warwick, there is a pool of four acres, in a very secluded spot; and, being an excellent manor, it attracted the attention of some gentlemen who had a right of sporting there. For the purpose of taking a few live baits, a casting net was thrown in, and it was soon perceived they had captured a considerable prize. It proved to be a pike, weighing thirty-three pounds, three feet six inches in length, and two feet in girth. This success stimulated the party to fresh exertions; live baits were put on the hooks; and after more than an hour's struggle, a second pike was landed, weighing thirty-three pounds and a half; length, forty-eight inches and a half, and girth, twenty-two and a quarter.

Wolverhampton Chron. May, 1833.

On Monday, was caught, in the Frogmore canal, a brace of pike, of the weight of forty-eight pounds; the male fish weighed twenty-two pounds and a quarter, the female twenty-five pounds and three quarters. To the disciples of old Izaak a view of these fish would be most interesting, as they were in the height of the season. They were forwarded to Brighton, by Mr. Watkins, steward to her Royal Highness the Princess Augusta, for the use of the Royal table.

Windsor Paper, Dec. 1832.

An enormous pike caught at Chillington pool, in Brewood, Staffordshire, seat of C. F. Gifford, Esq., weighed forty-six pounds, and measured from head to tail, four feet three inches. In its belly was found a trout, weighing four pounds and a half; and a mole, with which the fish was caught when devouring it.—*County Chron. June*, 1822.

Instances of the Rapacity of the Pike.—Pike taken with a gorged rusty Hook projecting out of his Side, &c. &c.—A friend of mine caught a pike a few minutes after breaking his tackle, and found it in the pike, with a part of the gimp hanging out of his mouth. He also caught another in high condition, with a piece of strong wire projecting from its side: on opening it, a double eel-hook was found at the end of the wire, much corroded. This may

account for so few pike being dead after they have broken away with a gorge hook in them.

Jesse's Gleanings.

An account will be found in *Davy's Salmonia*, of a pike taking a bait with a set of four hooks in his mouth, which he had just before broken from a line.

*** This proves the assertion under the head *Trout*, of the want of sensibility of fish in being hooked.

Two boys, one about seven, the other about nine, the sons of Mr. Dilworth, of Charlceste, after play, went to a pond belonging to the Rev. Mr. Lacy, to wash their hands. A pike seized the hand of Dilworth, who drew back his hand with the pike, and threw it on the bank, without its letting go; but the boys were too much confused, to prevent its gaining its native element. The hand of the boy was much lacerated.

Warwickshire Advertiser, Oct. 12, 1822.

A pike of a monstrous size in the Earl of Abingdon's mote, destroyed four young swans, feathers and all. It was remarkable, that an old cobb swan hatched five young ones, and the fifth would have shared the fate of the others but for the gardener's assistance. *Gent. Mag.*

As Mr. Leigh's gamekeepers were dragging a part of the river Avon, under Berscott Wood, they caught a pike, which, after laying on the bank, wanted to disgorge something; it was immediately opened, and another fish taken out of its belly, of two feet two inches, weighing four pounds and a half; the weight of the pike was sixteen pounds.

Near Youghall, a yearling calf drinking in the river Blackwater, was seized by a pike, which was drawn out of the water before quitting hold; it weighed thirty-five pounds. Ireland is remarkable for abundance of pike; in the Shannon and Lough Corrib they have been found seventy pounds weight.

Daniel's Rural Sports.

A girl fourteen years of age went to a pool of water belonging to S. P. Wolferstan, esq. at Stratford, in Staffordshire, to wash herself; whilst so doing a large pike seized one of her hands, by which it was instantaneously hauled ashore, and secured with difficulty, — the hand was much lacerated. The fish was two feet ten inches long.

June, 1822.

On emptying a pool which had not been fished for ages at Lillishall Lime Works, near Newport,

an enormous pike was found, weighing upwards of one hundred and seventy pounds.

Dodsley's Register, 1765.

A monstrous large pike taken at Loch Alva, by Colonel Thornton, measured five feet four inches; weight forty-eight pounds.

At Loch Spey a pike was killed that weighed one hundred and forty-six pounds.

Thornton's Sporting Tour.

A large pike was caught in the river Ouse which weighed twenty-eight pounds, and was sold to a gentleman, of Littlepont, for one guinea,—the cook found in the fish a watch, with a black riband and keys, maker's name Cranfield Burnham: upon inquiry, the watch had been sold to a gentleman's servant who was, unfortunately, drowned. *Gent. Mag.* vol. xxxv.

Sir Cecil Wray caught, in 1799, at the draining of the water from his lake, at Summer Castle, a pike that weighed forty-seven pounds.

A pike was caught in Bixton river, near Norwich, which weighed forty-six pounds.

Dodsley's Register, vol. iii.

A large pike was caught in the Ouse, near Passenham, fifty-nine inches long, and fourteen in

width; a painting of this pike was preserved at Perry's Park House.

Morton's Nat. History of Stafford.

A large male pike was caught in Exon park, belonging to the Earl of Gainsboro,—length four feet, girth two feet and a half, weight, thirty-seven pounds; it was the largest ever taken in these waters. *Gent. Mag.* vol. lxvi.

Pike were taken in Whittleseamere, and in Blenheim lake, of twenty pounds weight, and of thirty-five pounds in Winandermere.

New Monthly Mag. 1820.

Mr. Waring, when trying for roach with a single gut line, and strong hook, was suddenly seized and carried away. The tackle was let go, and art resorted to to tire the fish; but the punt was obliged to be let go, and the fish took punt and every thing down the stream for some distance, without appearing to lose any of his strength. By great skill he was at length brought to the top of the water, and got home just as he arrived at some weeds, where he must inevitably have liberated himself; it proved to be a pike of sixteen pounds and a half weight, hooked under his *vent-gill*, leaving him power to escape.

Sporting Mag. June, 1835.

It is generally imagined that pike will not take the fly, but here are instances to the contrary. One would consider him in a sportive mood at the time, as their usual baits are all of such a very different description. *Editor.*

Pike taken by fly-fishing.—The following singular occurrence in piscatorial annals took place at Llandrindod Wells, in Radnorshire. A gentleman was fly-fishing in the Ithon for salmon, with a large brown-winged fly, with a gold twist body, made on a No. 1 hook, when a pike, weighing nearly eight pounds, rose, was hooked, and killed.

A few years ago, a person trolling for pike in the Lugg, near Sutton, caught a salmon about nine pounds weight, which dashed at the bait with all the ferocity of a pike.

John Bull, Nov. 18, 1827.

A friend of mine has caught a pike with an artificial fly, at Boxmore, Herts. *Editor.*

Angling for Pike with the Fly.—A kind of fishing not much in use, but on some waters most deadly; it is practised in the lochs of Scotland. The pike fly should be large and gaudy, fabricated of divers feathers and tinsels, to resemble the king-fisher, or large dragon-fly.

Use it in a strong warm wind, upon water from six to two feet deep, and near the weeds.

Stoddart's Scottish Angler.

Stones found in the stomachs of Pike.—The *Rev. W. T. Bree, of Ullesley Rectory*, mentions having, in the year 1830, found in a pike of three and a half pounds weight, a stone which weighed four ounces three quarters: he also saw in one, a pebble, much larger, at Packington hall, the seat of the Earl of Aylesford; and had conversed with a fisherman on the subject, who had seen many, one as large as his fist, which he had kept several years; there can be little doubt these stones entered the fish through the mouth, either swallowed as they were falling into the water, or in seizing his prey. *Maj. Nat. Hist.* Vol. iii. No. 17.

Blind Pike.—The Marq. de Montalbert often fished for pike in the *Fountain of Gabard*, in *Angoumois*, and always found them blind, or if not quite so, the one eye blind, and the other diseased. This fountain is a species of gulf, of which the bottom has never been found; no nets can be used here. This fountain also discharges itself in Lissonia, in which no fish are ever found blind.

Hist. de L'Académie des Sciences, 1748.

IRELAND.

Some years since, when visiting the Marquis of Clanricarde at Portumna Castle, two gentlemen killed, in the river Shannon, an amazing pike, weighing ninety-two pounds, which had got on ground in pursuing small fish. His length was such, that when carried across on an oar, the head and tail touched the ground.

Wild Sports of the West.

In the *River Shannon* a large pike was taken weighing seventy pounds. At Hull river, near Beverley, one was taken weighing eighteen pounds.

It is no unusual event for a pike to be taken from thirty to sixty pounds, in Loughs Mask and Corrib. The trout in these loughs are also immensely large; they weigh from five to fifteen pounds.

Angling for Pike with the pooka in Ireland.—The pooka is formed with a piece of flat board having a little mast and sail erected on it. Its use is to carry out the extremity of a long line of considerable stoutness; an infinity of droppers or links are suspended, each armed with a hook, and bait; corks are affixed to the principal line to keep it buoyant on the surface, and from a weather-shore; if there be a tolerable breeze,

any quantity of hooks and bait may be floated easily across the water, the corks indicate to the fisherman when a fish is on the dropper, which he attends to in a small punt.

Wild Sports of the West.

Gander Fishing for Pike.—Several years ago a farmer, who resided in the immediate neighbourhood of Lochmaben, Dumfrieshire, kept a gander, who not only had the trick of wandering himself, but also delighted in piloting forth his cackling harem to weary themselves in circumnavigating their native lake, or in straying amidst the hidden fields on the opposite shore. Wishing to check this flagrant habit, he one day seized the gander just as he was about to spring into the pure breast of his favourite element, and, tying a large fish-hook to his leg, to which was attached part of a dead frog, he suffered him to proceed on his voyage of discovery. As had been anticipated, this bait soon caught the eye of a greedy pike, which, swallowing the deadly hook, not only arrested the progress of the astonished gander, but forced him to perform half a dozen somersets on the surface of the water! For some time the struggle was most amusing,—the fish pulling, and the bird struggling with all its might; the one attempting to fly, the other to swim from the invisible enemy, —the gander for one moment losing, the next regaining his centre of gravity, and casting, be-

tween times, many a rueful look at his snow-white fleet of geese and goslings, who cackled out their sympathy for their afflicted commodore. At length victory declared in favour of the feathered angler, who, bearing away for the nearest shore, landed, on the smooth green, one of the largest pikes ever caught in the castle-loch. The adventure is said to have cured the gander of his propensity for wandering.

In the reservoir near Glasgow, the country people are reported to be in the habit of employing ducks in this novel mode of fishing. This latter fact is not vouched for, but may be inquired into.

The principal way to take a pike in Shropshire is to procure a goose, take one of the pike lines, baited, tie the line under the left wing, and over the right wing of the goose,—turn it into a pond where pikes are,—and you are sure to have some sport. *Barker.*

Pike and Eagle.—Mr. Loyd, in his *Sporting Anecdotes of the North,* observes, that there are numerous instances of eagles pouncing on pike when basking near the surface of the water. One of them not being able to disengage his talons, was, of course, drowned. The eagles have been known to strike turbots and other fish in the sea with similar results.

Pike catching a Swallow on the Wing.—A young gentleman walking in Mr. Longster's garden, at Malton, on the banks of the Derwent, saw a fine pike suddenly dart out of the river, and seize a swallow that was gliding along the surface of the water. The sun might be so low as to place the bird's shadow in advance of the bird itself, and thus give the pike an advantage.

Mag. Nat. Hist. vol. vii. p. 43.

Pike and Dog.—A gentleman angling for pike, succeeded in taking a very large one, at which time he was encountered by a shepherd and his dog,—he made the man a present of the fish, and while engaged in clearing his tackle he saw the dog, who had for some time been expressing his satisfaction by the most unequivocal signs, seat himself unsuspectingly with his tail at a tempting proximity to the jaws of the pike, which suddenly caught at it. The dog was terrified at such an appendage to his tail, he ran in every direction to free himself, even plunged into the river, but in vain, the hair had become so entangled in the fish's teeth. On landing, he ran to his master's cottage, and was released.

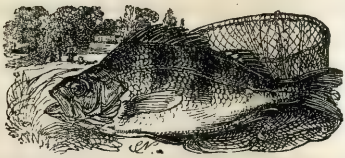
Dr. Smith.—Fish and Fisheries.

Pike and Fox.—At Dropmore, Bucks, (the seat of Lord Grenville,) the men employed in the gardens having observed the swans in an agitated

state, and several ducks having been lately stolen, they repaired to the lake, when they observed a fox approach the water, snatch up a fish, and run off with it; the party gave chase, and reynard dropped his prey, which proved a pike weighing three pounds and a half.

Windsor Express, June, 1832.

PERCH.



The perch is the best known of the osseous fishes of Europe, and is one of the most esteemed and striking in its character. It is both a river and a pond fish. As a river fish it appears to rise rather towards the source of the waters, than to descend to their outlets, to the ocean, being very inimical to salt water. It is seldom found at a greater depth under water than two or three feet. The perch are a very prolific fish. *Picot* mentions a million of spawn in one fish. They are taken, of nine pounds weight, in Lough Corrib, and afford very excellent sport in *Whittlesey* mere with minnows; very fine perch are also caught at *Dagenham Breach*. *Editor.*

The perch are to be found in all the temperate parts of Europe, and in great part of Asia; they are also found in Italy and Sweden, likewise in Great Britain, where they are very plentiful; it is not mentioned in the North Sea, nor in the Faunas of the Orkneys and Greenland. It is fished for, says *Pallas*, all over the Russian empire and Georgia; and if the perch does not exist in North America, there is at least a fish very like it. This fish inclines rather to the sources of a river, than to descend to the sea. Its motion in swimming is in bounds, and not in flocks, like other fish. A perch seven inches long is considered three years old. *Baron Cuvier.*

Perch are in general very tenacious of life; some of them have been known to survive a journey of sixty miles on dry straw. *Bingley.*

The various ways of catching perch, and their boldness in biting, afford the angler most excellent sport. The perch delight in clear swift rivers, with a gravelly bottom, not very deep water. They thrive best in ponds which have a brook or rivulet running through them. Their best baits are crabbs' claws, perch eyes, red worms, without knots, all well scoured, minnows, &c. &c.

The *Editor* had good sport at Frencham, with minnows.

Some time ago, two young gentlemen of Dumfries, while fishing at *Dalswinton loch*, having expended their stock of worms, &c. had recourse to the expedient of picking out the eyes of the dead perch, and attaching them to their hooks, a bait which the perch is known to take quite as readily as any other. One of the perch caught in this manner struggled so much when taken out of water, that the hook had no sooner been loosened from its mouth, than it came in contact with one of its own eyes, and actually tore it. The pain occasioned by this accident only made the fish struggle the harder, until at last it fairly slipped through the holder's fingers, and again escaped to its native element. The disappointed fisher, still retaining the eye of the aquatic fugitive, adjusted it on the hook, and again committed his line to the waters. After a very short interval, on pulling up the line, he was astonished to find the identical perch that had eluded his grasp a few minutes before, and which literally perished by *swallowing its own eye.*

London Museum, Sept. 14, 1822.

I caught a large perch, weighing three pounds, by a hook passed through the back fin of a minnow; and lost several by the hook passed through the upper part of the mouth. *Salmonia.*

VARIETY OF PERCH.

Pike Perch.—This fish attains the length of three or four feet, and is sometimes found of the weight of twenty pounds, in Northern Europe, the Danube, and lakes of Saxony. It remains in deep water, and seldom approaches the surface. It is greatly prized, and the fishing for it is ardently followed in the North: it quickly dies when taken out of the water.

Perca Cabrilla.—This perch has only one fin on the back; the covers of the gills are guarded by two spines; the colours in stripes, red and blue; the sides marked with dusky bands.

Gent. Mag. vol. xli. p. 249.

Silver Perch.—A most beautiful fish, coloured after nature, may be seen in *Mr. Bennet's* fine work of the fishes of Ceylon.

Purple Perch is to be seen in the same collection.

Perca Labrax.—This perch has two fins; it is of a most delicious taste; grows to the weight of fifteen pounds; feeds on fish, sea-weeds, and shrimps, and is found in the Mediterranean.

Gentleman's Magazine, vol. xli. p. 249.

There is one species of perch which is capable of quitting its native element, and breathing the air, like eels, by climbing up posts, &c. &c.

Gallery of Nature, vol. v.

Crooked Perch.—Back quite hunched, and the back-bone near the tail distorted; to be found in the Thames, near Marlow; also in a perch-pool in Lyn Kaithlyn, Merionethshire.

The author of the *Angler's Sure Guide*, says, he once saw the figure of a perch drawn with a pencil on a door near Oxford, which was twenty-nine inches long. In the lakes of Lapland and Siberia, perch are found of a monstrous size. *Mr. Pennant* says, one taken in the Serpentine river weighed nine pounds. In the great pool of Bala, North Wales, they are taken at five pounds weight.

Schoeffer asserts that in Lapland there is a dried head of a perch preserved in the church at Luchlah, which, from the top to the under jaw, is about two hands broad.

A perch of eight pounds was taken in Dagenham Breach by Mr. Carter.

At Mulham Water, near Settle, in Yorkshire, perch grow to five pounds or upwards, but are generally blind with one eye, or both.

Sportsman's Cyclopedia.

It sometimes occurs that the fishermen take a perch with a stickleback in his mouth, which they take out, and place the perch again in the water; but the wound in his mouth is so great that it cannot be shut, and he becomes a prey to ducks and large fish. *Dr. Bloch.*

Girl killed by swallowing a Perch.—At Weedon-bec a young man and maid were playing with a perch, the lad threatened to make the girl swallow it, on which she opened her mouth unthinkingly, and the fish springing out of the lad's hand, suddenly stuck in her throat, which killed her on the spot. *Gent. Mag.* vol. I.

As a barge heavily laden was passing up the Thames and Severn Canal, at Lodgmore, near Stroud, a small perch pursued by a pike, actually jumped from the water on board, and was immediately followed by the pike, when both were secured by a boy who was steering the vessel,—the pike weighed between two and three pounds. *Gloucester Chronicle*, 1833.

In the Yas and Murrumbridgie rivers native perch are caught, from the weight of seventy to one hundred and twenty pounds, the breadth is great in proportion to the length of the fish.
Bennett's Wanderings in New South Wales.

RUFFE, OR POPE.

The Ruffe is common to almost all the rivers and canals of England; particularly the Thames, the Isis, and the Cam, also the Yare, have it in abundance, and though said to be unknown in Spain, it is found over the colder portion of the European continent,—preferring slow, shaded streams, and gravelly bottoms. In its habits the ruffe resembles the perch, and feeds like that fish, it seldom resists a small red worm; when you have a bite strike directly. It is five or six inches long, and its flesh is said to be excellent; it must be dressed in the same manner as the perch.

Yarrell's British Fishes.

CARP.

Carp is a very wary fish, and requires the angler's utmost patience to ensnare. The biting time of this fish, (particularly of large carp) is very early in the morning. They delight in still water, where there are large flags and weeds, with broad leaves. One of the best methods of angling for carp is to gently drop in a line leaded with a single shot only, which will be sufficient to sink the bait. Do this in the following manner,—let the bait so fall, that itself, and a few inches of the line, with the shot, may rest on one of the large leaves, the bait itself hanging within the water, over the edge of such a leaf; this bait must be a red worm, with a gentle to cover the point of the hook; when you observe the shot drawn from the leaf, give the fish time to swallow his bait. But if you are fishing with paste, or boiled green peas, &c. &c. strike instantly,—let your tackle be strong, for the carp will afford you sport. You are enabled to judge of their haunts, when you hear them smack, or suck, as it is sometimes called. Throw in some slices of

bread as ground-bait, on the over-night: and cast in, whilst angling, some small pieces, like peas, if you use paste; but the ground-bait is sufficient to entice them to the place.

Carp exhibit more or less of colour, according to their age, and the waters they inhabit; those taken from ponds will be greatly benefited in taste, by being put into river water for ten days, or a fortnight. Carp feed upon the larva of insects, worms, spawn, and young shoots of water plants, for which reason it is found beneficial to carp-ponds, when the water is low, to sow grass-seeds round the edges, &c. &c. They will live a long time out of water, and, with proper care in changing their litter, (keeping it moist,) they may be transported to a great distance. Dr. Block says, seven ships are employed in this trade to a great extent, from Polish Prussia to Stockholm, and are said to produce an ample profit. Carp were introduced into England in the year 1514.

Editor.

At a relation's in Essex, I rose two successive mornings at day-break, and caught with lob-worms a brace of fine carp, eighteen inches long, and broad in proportion. I angled at different parts of the day for several days, even with green peas, paste, &c. &c. without obtaining a single bite. *Editor.*

Weight of Carp.—In England and France, carp seldom exceed ten pounds. In Germany they are monstrous. One was taken at Dertz which weighed thirty-eight pounds. In Prussia they frequently weigh forty, and in the Volga they are five feet long. One caught near Frankfort on the Oder, was nine feet long, and three feet in width, weighing seventy pounds. Lake Zug, in Switzerland, produces carps of ninety pounds; and in the Dniester, some had been taken, of which knife-handles are made with the scales. Carp do not arrive at this prodigious size until they are of a very advanced age. *Donovan.*

They are sometimes caught in Lago di Como, in Italy, weighing two hundred pounds. *Mrs. Garrick* said she had seen in her country, Italy, a head of a carp served up at table sufficient to fill a large dish.

Dr. Bloch records a carp taken in the domains of Count de Schulenbourg, in Saxony, that weighed thirty-two pounds; but *Jovius*, and ancient writers, mention some much larger.

Carp in warm climates often arrive at the length of two, three, or four feet; and weigh, from twenty to thirty or forty pounds.

Shaw's Zoology.

Mr. Ladbroke, from his park at Gatton, presented Lord Egremont with a brace that weighed thirty-five pounds. In 1793, at the fishing of a large piece of water at Stourhead, where a thousand brace of carp were taken, the largest was thirty inches long, and twenty-two broad, and weighed eighteen pounds.

Mr. Milward has drawn carp from his marl pits, weighing twenty-five pounds a brace, and having two inches of fat upon them. They were fed upon pease.

A brace of carp were presented to the Princess of Wales, weighing twenty-eight pounds, caught in a pond near Godstone, Surrey.

Dodsley's Regist. 1761.

A large carp was caught in the Thames, near Hampton Court, which weighed thirteen pounds.

Taylor's Angling.

At the *Prince of Condé's seat, at Chantilly*, the most pleasing things were the immense shoals of very large carp, silvered over with age, like silver-fish, and perfectly tame; so that when any passengers approached, they came to the shore in great numbers to be fed, bread being always ready for them: they even suffered themselves to be handled. *Dr. Smith.*

A pond in the garden of Emmanuel College, Cambridge, contained a carp near eighty years old.

Buffon assures us that they feed them in the moats in Pontchartrain, and that there are some carp there that are two hundred years old, and some in Lusac about the same age. The middle of Europe is the best suited to carp; in proportion as they are found north, they become smaller.

Very fine carp are caught at *Dagenham Breach.*

After trying many experiments to catch carp, without success, sink an old boat with small deck, for three months, and raise it up by one on each side; you will then find plenty of large carp and eels, but not small ones, as they will not enter the boat. *Duhamel.*

Culture of Carp and Tench in Fish Ponds.—It is supposed that ninety brace of full-sized carp, and forty of tench, are a good stock for an acre of water. In some parts of Germany, where the domestication of fish is practised, a suit of ponds are so constructed that they can empty the water and fish of one pond into another. The empty one is then plowed, and sown with barley; when the grain is in the ear, the water and its inhabitants are again admitted; and, by feeding

on the corn, are more expeditiously fattened than by any other management. All ponds should have a brook or rivulet running through them, or fresh springs. It increases the feed and comfort of the fish during the heat of summer, and counteracts the effects of frost during the winter.

Daniel's Sports.

In the Wealds of Sussex the fish ponds are innumerable.

An excellent method of fattening carp, is to take the mud round the outside of the pond, in the month of April, when the water is low, and sow some hay seeds thereon, because, in the winter, when flooded, the produce will afford excellent food for the carp.—*Mr. Cherry*, of Birmingham, says, that a friend of his does this every year, and by that means obtains excellent fish; and that the largest carp he ever saw taken, was at Blenheim, by Beckley, the Duke of Marlborough's fisherman; it weighed thirteen pounds.

To Fatten Carp out of Water.—An experiment has been made, by placing carp in a net well wrapped up in wet moss, the mouth only being left out; then, hanging it up in a cellar, or cool place, to be frequently fed with bread and milk, and to be often plunged in water. It is said to have grown very fat, and to have been of a very superior taste. *Pennant.*

This method is practised in Holland.

Carp Ponds.—They have three ponds for carp in France. The first, for the growing carp, which are left in until the age of three years, when they begin to spawn: they are fed (independently of what they meet with in the pond) with the excrements of animals, such as cows, horses, sheep, beans, pease, potatoes cut in small slices, moist bread, goat cake, and stale fish. The second, for the spawn, which must be a very small pond, in a warm situation. The third, for the breeding pond: the carp about six pounds breed the best: the pond not to be above three feet deep, in a marshy situation, where the bulrushes grow in great plenty; rather a deeper channel to be cut along the middle of the pond. The roes of carp are frequently known to weigh more than the fish.

French Author on Angling.

Carp particularly delights and thrives in ponds where the rain runs into, from sheep's dung, and other dung. There are hermaphrodites amongst carp; and I can convince any body that doubts of it, as I have in my collection the entrails of a carp of this description. They are fed with beans, pease, potatoes cut in pieces, turnips, moist bread, stale fish, and bread made from goat's milk.

Dr. Bloch.

A fishmonger in Clare Market exposed for sale a bushel of carp and tench in the same dry vessel; but a small proportion of these could be daily sold; therefore, they were exposed for several successive days, and continued in good health.

D. B. Phil. Trans. 1771.

Though the carp is generally thought to be a river fish, ancient zoologists ranged it among the sea fish; and I know instances of its being caught near Dantzic. I have great reason to believe that many other fish, of which it is commonly supposed that it can only live in the sea, may also exist and breed in fresh water.

J. Forster, Phil. Trans. 1771.

*** Might not these be the sea carp?—*Editor.*

GOLD FISH.

"This variety of the carp appears to be a native of Tche-Kiang, in China, where it is domesticated and kept for ornament. The Chinese breed these carp in small ponds made for the purpose, and even in porcelain vessels. This fish is said to be no larger than a pilchard; but the writer of this article saw some much larger, rolling about in the shallow water of the botanical garden at Ghent; they were so tame, that they took their food out of the hand. Their spawn appears to be a considerable source of trade to the Chinese, as described in this book elsewhere. The gold fish has been

many years domesticated in this country, and now breeds in our fish ponds almost as readily as carp. The male is of a bright red colour, from the top of the head to the middle of the body; the rest is of a gold colour; no gilding can equal it. The female is white, but its tail and half its body resembles the lustre of silver. The red and white colour are not always the marks of the male and female; but the female has several white spots round its orifices of hearing, and in the males these spots are much brighter. Gold-fish are light and lively, and their colours appear in the greatest splendour when swimming about in glass bowls. They have been known to come to be fed at the sound of a small rattle; yet they are extremely delicate, and sensible of injuries of the air, such as a loud noise, the roaring of cannon and thunder: a strong smell, a shaking of the vessel, or a touch, will destroy them. These fish live with little nourishment. The Chinese feed them in their reservoirs with small balls of paste, pork dried in the sun and reduced to a delicate powder, sometimes snails, the slime of which is a great delicacy for them. In winter they are kept in warm rooms, and take no nourishment. This fish multiplies fast in warm climates. The spawn floats on the top of the water; but the fish will eat it, if not immediately taken away, and put into another vessel, where it is exposed to the sun until it is vivified by heat. Gold fishes are very plentiful in Japan, and of the

most beautiful colours. The first were brought to England in 1611.

Habits of the Gold Fish.—Mr. Hull, of Derbyshire, had in his garden a marble bason containing gold fish; the surface of which bason was nearly covered with a green weed, which he had endeavoured to eradicate, but without success. It seemed to encourage a small vermillion-coloured worm, upon which the fish fed. They afterwards spawned; in watching the progress of which, Mr. Hull found that the fish ate their own fry as well as the worm. This induced him to remove the young fry into glass globes, with a small quantity of the weed, and they grew rapidly, but diminished in number. It was observed, the larger devoured the smaller. After which, Mr. Hall selected equal sizes together, and the fish increased in growth and strength.

Mag. Nat. Hist. vol. vi.

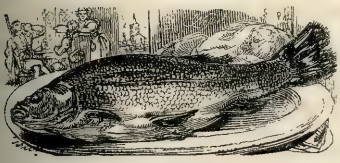
GOLD AND SILVER FISH.

It is well known that these fish live and thrive in a bowl on pure water; and from this it may be inferred, that fish in general are endowed, by the economy of their natural organization, with the faculty of deriving sustenance from *mere water*, in the same manner as terrestrial animals derive their sustenance from vegetables.—*Dr. Anderson.*

Owls poachers of Gold and Silver Fish.—The *Rev. Mr. Brown, of Allesley*, related that the common brown owl was seen to feed its young with live fish, chiefly loach and bull-heads, taken out of a neighbouring brook; and another correspondent confirms the fact, which is corroborated by a labourer employed by the Duchess of Portland to watch the fish-pond in the flower-garden at Bulstrode. The Duchess having lost many gold and silver fish, suspected the pond had been poached; and the watchman detected the robbers, whom he saw alight on the side of the pond, and there capture and devour the fish. The robbers proved to be the common brown owls.

Jesse's Gleanings, second series.

THE TENCH.



This fish is a native of most parts of the globe; its length, from twelve to fourteen inches; and weight, from four to twenty pounds. It is very similar in its habits to the carp: it delights and thrives best in stagnant ponds, and haunts shaded places, under the roots of trees; it takes the same

baits as the carp, with the exception of paste. It bites freely, in summer early and late, and in the autumn in the middle of the day, when the sun is out, and even better towards the close of a shower.

Editor.

Mr. Daniel recommends a few gentles to be cast in where you are angling for tench, and the worms *dipped in tar*, which, he says, has the property of alluring them; but the *Editor*, with all due deference, is somewhat sceptical on this matter.

Mr. Western's pond at *Munden-hall, Fleet, in Essex*, was thick with weeds, and the mud had dyed the fish of its own colour, which was black as ink; yet no tench could be better grown, or sweeter flavoured: many were taken that weighed nine and ten pounds the brace; and the skull and backbone of one preserved at the hall, compared with those before mentioned, must have been double the weight. At Leigh priory a quantity were caught weighing three pounds each. The shape of the tench taken at Thornville Royal stamps it a *lusus naturæ:* a pond was ordered to be filled up; a tench was found grown to the size of a hole under the roots of a tree, where it had many years been confined. Its length, from fork to eye, was two feet nine inches; circumference, two feet three inches; weight, eleven pounds nine ounces: belly, vermil-

lion. This extraordinary fish, after having been minutely inspected by many gentlemen, was carefully put into a pond. At first, it merely floated; but at last it swam gently away, though with some difficulty. A fine print of it is to be seen in the *Rural Sports*. *Daniel.*

Mr. Pennant has heard of one tench that weighed ten pounds; and *Salvianus* speaks of some that weighed twenty pounds, which were thick in proportion to the length. When well fed, the tench weigh about eight pounds. *Mr. Geoffroy* found in a tench a tape-worm, two feet and a half long; nevertheless, the fish was very healthy and fat.

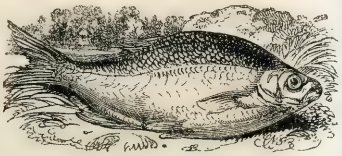
Great quantities of fine tench are caught in Brecknockshire Mere.

RUDD.

The rudd is not usually met with; it is only in some particular parts of England that it inhabits deep and gentle streams, in holes, among the weeds, slimy mud, soft gravel. *Mr. Daniel* says, they are worth the angler's attention. The tackle must be strong and fine; they take the same baits as the carp or chub; others also angle for them as for roach. Bait with gentles, red worm, wasp maggots, and red paste, using a ground bait of boiled malt. They bite at the top of the

water; and if among weeds, use neither lead nor float. Rudd produce ninety-one thousand ova; and are found of two pounds weight. Some very fine rudd may be caught at Dagenham Breach. In 1796, at Kempton Hoo, near Welwyn, Hertfordshire, a rudd was caught with a minnow, which is extraordinary, from the situation of teeth in the throat, which property belongs only to fish of prey.

BREAM.



This fish is well known in England, but is not held in such high estimation as on the continent, where it attains a very large size, and where its flesh is of a more delicate flavour. In this country bream delight and thrive most in ponds which receive the drains of the farm-yard. They yield good diversion to the angler. The tackle must always be strong, and the baits must be the same as for carp and tench. Breams are very prolific —in one taken, one hundred and thirty thousand ova were found. *Dagenham Breach* is celebrated for large bream. Three gentlemen of my acquaint-

ance caught here two large stable pails full of them in one afternoon. *Editor.*

The young bream are called chads, and have not the lateral spot until the second year of their growth. *Mr. Couch.*

Sir James Caldwell caught seventeen hundred weight of bream and pike in one day in the Lough Erne.

Bream have been taken in the Trent of eight pounds weight. *Lin. Trans.* vol. xiv.

In the lakes of Prussia bream are taken from under the ice to the value of £200 at a time; they are also caught in great quantities in Holstein, Livonia, and Sweden; not less than fifty thousand were taken in one lake at one time, they weighed eighteen thousand two hundred pounds.

Goldsmith Abridged.

Bream are held in high repute on the continent, where they abound in the lakes, and the fisheries are rented at a high price. The flesh is finer and whiter than in England. They are sometime two or three feet in length,—those of twelve and fourteen pounds are preferred for the table. *Donovan.*

Dr. Bloch says bream are one of the most important fish in his country (Prussia); the fisheries for bream are very considerable in the lakes of the kingdom of Prussia. In Sweden the bream weighs from twelve to twenty pounds,—they use a bell to drive the fish to their nets. *Dr. Bloch* found in a fish of six pounds one hundred and thirty-seven thousand eggs.

Gesner reports, that in Poland a great number of breams were put into a pond, which, in the following winter was frozen into entire ice, and not one drop of water remaining, nor one of these fish to be found though diligently searched, and yet, in the spring, when the ice was thawed, and the weather warm, they all appeared again.

The bream have great enemies in the buzzard and other birds of prey, but it often happens when the bream are large and strong, and the buzzard has struck his talons far into the back of the fish, that he finds the weight too heavy for him to carry off, and in his turn is carried below into deep water, and drowned.

Bream may be carried a long way well covered with snow, or by putting into their mouth bread dipped in alcohol.

The bream seems formerly to have been a favourite fish in England. In the reign of Henry the Sixth, 1454, we are told,---a pye of four of them, in the expenses of two men employed for three days in taking them, in baking them, in flour, in spices, and conveying the pye from Sutton, in Warwickshire, to the Earl of Warwick, at Mydlam, cost xvj*s.* ij*d.*

Dugdale's Antiquities of Warwickshire.

BARBEL.

This fish inhabits deep waters with stony bottoms, and is compared to swine, in rooting its snout into the soft gravel for food, and in herding together, as *Mr. Salter* says. The barbel is also a game fish, and affords great sport to the angler, not unmixed with much anxiety from their long, and powerful struggling, after they are hooked; the best bait for barbel is soaked graves, using as ground-bait the same, but mixed with clay. In still holes, gentles, lightly enclosed in clay, also lob-worms enclosed in the same are good ground-baits. You can easily perceive a bite, which

produces a vibrating sensation from the wrist to the shoulder, when you must instantly strike.
Editor.

Barbel fishing, like some other individual angling, finds devotees, who pursue it with singular ardour. There are barbel fishers who appear to feel little amusement in taking any other fish. Such often become great adepts; they understand the time, seasons, bait, and localities best suited to the purpose, so as to be seldom disappointed in their sport. Their patience is inexhaustible, their indifference to loss of time great, and the distances they travel to visit their favourite haunts, shews the anxiety which the hope of success creates in them. It is well known that cold weather, even the *slightest* frost puts an entire stop to this sport, but rain following a long drought stirs up these fish to take their usual baits with astonishing avidity. *Editor.*

Three of the largest barbel ever caught at Hampton, by angling, were taken by a gentleman, of Burlington-street. They weighed thirty-nine pounds; the general weight of barbel is from two to eighteen pounds. *Daniel's Sports.*

The *editor* of these anecdotes caught, at Shepperton, one morning before breakfast, twenty-eight pounds of barbel, one of which lot weighed

ten pounds, the bait used was graves; the late *Mr. Marriot*, a celebrated barbel fisher, was in the same boat, and used lob-worms, but did not hook a fish.

Leeches dried are a good bait for barbel, and on immersion in the water, they are sufficiently restored to their natural appearance to be used with success. Some authors assert that barbel have been caught, from six to twelve feet long.

Dr. Bloch.

A barbel angler has, however, occasion to exult at the sport which he finds. August 9, 1807, at one of the deeps near Shepperton, which had been prepared by baiting over night, a party of four gentlemen, named Emes, Atkinson, Hall, and Moore, separated into two boats, and began fishing between ten and eleven o'clock. In about five hours they caught the following quantity:—

Emes and Atkinson.		*Hall and Moore.*	
2 fish weighing	20 lbs.	2 fish weighing	15 lbs.
6	32	20	23
30	28	23	32
4 thrown over			
42	80	45	70

Total 87 fish weighing 150 lbs.

Pickering's Edition of Walton.

Mr. Warren, a perfumer, of Mary-le-bone-street, angled in Walton Deeps, and before noon caught 280 lbs. of large-sized barbel.

Brookes' Art of Angling.

Mr. Waring's new mode of catching barbel, simply consists in providing yourself with good tackle, and a large quantity of clay; when you find the fish shy, put a ball of this clay, sufficiently heavy not to be carried away with the stream, about four or five inches above the hook, and leaving the bait to move about by the flow of the river, place the float rather above the water. When you have a bite, which is easily perceived, strike quickly. This way has enabled *Mr. Waring* to have good sport when his fellow anglers have entirely failed. *Sporting Mag. June*, 1835.

Stations for barbel fishing.—Barbel fishing has been, and always will be a favourite recreation for elderly anglers. Of all the waters the Thames is the best, from Kew upward. Though Putney bridge has afforded sport. Brentford Ait, and the adjoining island, which once bore the name of Barbel Island; Twickenham and Teddington; and wooden bridges, not stone; Walton, Hampton Court, and the Gallery-bridge deeps; Shepperton, &c. &c. are good stations. Great quantities of barbel are also taken about Lea-bridge; the potatoe hole; in Snowden's water; Hughes and Shurry's

water; Broxbourn bridge. Scorers, graves, lob-worms, and gentles are the best baits, but all best at times. Ledger is the best method: some anglers use a piece of tobacco-pipe fixed on the line, in a similar manner to the lead, and cover the pipe with a ball of clay; the latter method I take to be the best, for when you strike a fish, you disengage your line from the weight of your ledger.

New Sporting Mag. Sept. 1834.

Most extraordinary method of taking Barbel.—*Darcy*, who kept a *music-shop* at *Oxford*, though very lusty, was an excellent swimmer; he used to dive after barbel into a deep hole near the four streams, a bathing-place well known to the Oxonians, and having remained under water a minute, he returned with a brace of barbel, one in each hand. The report that Darcy made, was, that many of these fish lay with their heads against the bank, in parallel lines, like horses, in their stalls. They were not disturbed at his approach, but allowed him to come close to them, and select the finest.

New Monthly Mag. 1820, *Part II.*

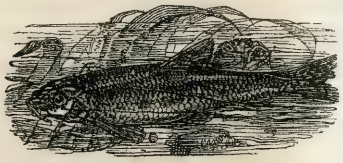
Barbel are taken in the *Danube*, of a much larger size than in our waters. After a dreadful carnage between the Turks and Austrians, on the banks of the *Danube*, barbel were found in it of such a vast size, and in such numbers, as to become a matter of record; and as their propensity

for human flesh was well known, it was attributed to the dead bodies thrown into the water.

Donovan, p. 29.

In the *Volga* they sometimes catch barbel from the length of four to five feet, and from thirty to forty lbs. in weight; in the Weser, from twelve to fifteen lbs. *Pallas Voyage.*

THE GUDGEON.



This fish is so generally known, that it needs little description. It, however, is interesting to the angler, by biting so freely. It is found in a gravelly bottom, with water not very deep. The best method to catch gudgeons, is with a paternoster line, and to move often. The rake to be used freely, the hook to be baited with red worms.

Editor.

Mr. Pennant remarks, that the few gudgeons which are caught in the *Kennet* and *Cole*, are three times the weight of those found elsewhere. The largest ever heard of weighed half a pound; it was caught near Uxbridge.

Gudgeons taken in *Harper's Brook*, near Brigstock, are eight inches long, and otherwise proportionable.

The compiler of the *Sportsman's Cyclopædia*, *Mr. Johnson*, had some in a pond, which, on an average, were so large as to weigh six to the lb.

Mr. Pallas observes that there are black gudgeons to be seen in the rivers of Russia, particularly in the Volga and Jaiq, and other rivers connected with these.

ROACH.

Roach are fishes well known to most anglers; they require as much attention in the taking as the larger fish; roach-fishing, however, affords such amusement, that many angle for this fish only. In pursuing this sport the finer your tackle is, the more you are likely to succeed. When barbel are feeding in the same place, it often happens that these lusty gentry clear away lines, baits, and all, from the fisher; they are supposed to be

attracted by the ground-bait. Roach are to be found in clear, swift streams; they principally delight in deep holes, particularly where there are gravelly bottoms. Here, more especially, they are taken of a large size, at the end of a swim; sometimes, also, with graves, and worms,—paste made of bean-meal, rabbit's-flic, bees-wax, and sheep suet beat well in a mortar, with a little clarified honey tempered before the fire, and stained with cherries, if in season, or vermillion, or with globules of paste made with new bread and sugar; perhaps the latter may be as tempting a bait as the former, and easier made. The ground-bait should be graves, bread and bran mixed with clay. They occasionally afford sport with a common house-fly; very fine roach are to be caught in *Dagenham Breach*. *Editor.*

Mr. Pennant asserts that a roach was caught, and brought to market, which weighed five pounds.

Walton says, the largest roach are found in the Thames, generally weighing about two pounds.

Angling in Hampton Deep, upwards of one hundred dozen of fine roach were caught in one day in the above Deep,—several weighed one pound and a half each. The oldest fisherman does

not recollect any thing like it before in angling. It was one of the finest day's sport ever known, and the fishermen attending could not take the fish off the hooks quick enough.

Morning Post, Oct. 22, 1821.

Near *Withyam, in the river Medway*, in the month of July, great quantities of very fine roach may be caught, and there are also plenty of dace which are shy of biting, but may be taken with a fly. Some very fine roach and dace are taken near Arlington Castle in this river,—and every accommodation may be had at a public-house near thereto, named the Gibraltar. This part of the river is also very fine and picturesque.

The ancient way of fishing for roach at London Bridge.—Take a strong cord, at the end of which, fasten a three pound weight,—one foot above the lead fasten also a small cord of twelve feet long; add, at convenient distances, half a dozen links of hair, with roach-hooks well baited, —then holding the cord in the hand the biting of the fish may be easily felt; this might be practised at other places, where the water is deep and the current very brisk.

Gentleman's Recreation.

The best method to cook roach.—(The same will apply to other fresh water fish.) Without scaling, throw some flour over them, and lay them on a gridiron over a slow fire; as they grow brown, a cut is to be made on the back, not more than skin-deep, from the head to the tail, and the fish is then replaced on the fire; when sufficiently broiled, the skin and scales will peel off, and leave the fish clean and firm; the belly is then to be opened, and the inside will come away cleanly; scraping and water washes away all the flavour and firmness of the fish. *Daniel.*

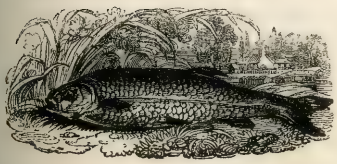
DACE.

The dace is a gregarious and very lively fish, and, during summer, is fond of playing near the surface of the water; it is generally found in deep and gentle streams, near the piles of bridges. Roach and dace are very similar in their haunts and habits. The dace is, however, a narrower fish, and, it is said that, if the scales on the back be rough to the touch, they are out of season; if they, on the contrary, be flat and smooth, the re-

verse. Dace are generally found together in the deepest parts of rivers, with gravelly and sandy bottoms; if fished for with flies, they should be a little under water. *Bainbridge's Fly Fisher.*

Dr. Bloch informs us that dace has been taken eighteen inches in length. In France they are sometimes found a foot long, and when the marshes on the *Oder* were dried up, the quantity left, of roach, was so great, that the neighbouring villages fed their hogs with them.

CHUB.



The chub, though not much esteemed as food, yet affords the young angler excellent sport, as it may be taken with a variety of baits. Several methods are employed for their capture, which may be practised with great success, always bearing in mind that this fish is very shy. You may return to the same holes where you began, and obtain sport; when once hooked, being leather-mouthed, you are sure of your fish. The angler

Donovan says, that the bleak is equally abundant in most of the rivers of the North of Europe. Its form is elegant, its colours are brilliant, and its flesh is in some esteem.

Gmelin speaks of this fish being taken formerly from four to ten inches in length, in the Thames, about Battersea.

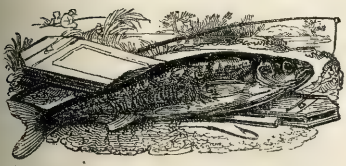
Mad Bleaks.—Mr. Pennant remarks, that bleaks are troubled with a species of hair-worm, and in certain seasons appear to be in great agonies, tumbling about in the water; yet they sometimes recover. *Mr. Daniel* took many bleaks, in Perry dock, which were puffed up and swelled out, and appeared big with spawn; but, upon making an incision, a tape-worm was drawn out from several of them, which was sixteen inches long.

Method of making brilliant artificial Pearls from the Scales of Bleak.—Take off, with much care, the scales of bleak, and put them into a basin of clear water; rub them together: repeat this operation in several waters, until there is no coloured substance attached to the scales: the silver matter drops to the bottom of the basin, and the redundant water must be taken off with the greatest care; the residue is a bright silver liquid, which is termed oriental essence. This being

mixed with isinglass, and with the help of a pipe, is introduced into very small hollow glass globes, of various colours; these globes are shaken until the liquid covers the inside, which will then afford an excellent imitation of the finest pearl.

Maisonneuve.

MINNOWS.



This beautiful little fish frequents gravelly streams, and bites readily at a small red worm or gentle, No. 12 hook. It is of a rich and agreeable flavour, but its chief use is as a bait for large fish. When minnows are thus used, it is necessary to keep them and other small fish in bran, else they grow putrid. At first they are naturally stiff, but after the bran is washed off they become pliable. *Daniel.*

Curious Assemblage of Minnows.—Messrs. Unwin and *Cowper*, crossing a brook, saw, from the foot of a bridge, something like a flower at the bottom of the water: it was in fact a circular assemblage of minnows; their heads all met in

the centre, their tails all diverging at equal distances, which gave them the appearance of a flower half-blown. *Cowper's Letters*, 1793.

Minnow Tansies.—To make these tansies in the spring, wash them well with salt, cut off their heads and tails, take out their inside without washing, fry them with yolks of eggs, flowers of cowslips and primroses, and a little tansie, and they prove excellent eating. *Walton.*

LOACH.

The Loach breeds and feeds in small, clear, swift brooks, and lives there on the gravel, and in the sharpest streams. It is in general not more than three inches long, has a beard similar to the barbel, and is successfully angled for with a small red worm, on the bottom, close to the ground. It is considered by Gesner and other physicians as a very nutritive fish. *Walton.*

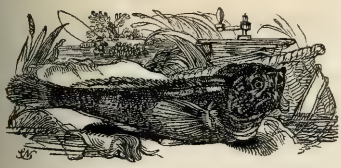
The loach is found in greater abundance in France than in this country. This fish was exported from Germany to Sweden by order of the king.--*Donovan.*

Willoughby mentions a loach near five inches long; and *Pallas* says they are very large in the rivers of Russia.

Loaches in France are fed with bread made of goats' milk, drains from a dunghill, &c.

The great loach forms a living barometer; on being placed in a vessel of water, with earth at the bottom, it never fails to predict the approach of a storm, by rising from the bottom of such a vessel, and swimming about near the surface in an unquiet manner. *Shaw's Zoology.*

BULL-HEAD.



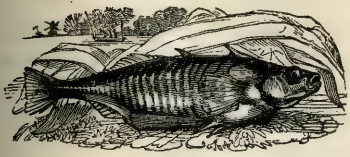
The bull-head is a very ugly fish, it seldom exceeds three inches and a half in length; some anglers consider them better baits than the minnow, when the gill fin is cut off; it is, indeed, a tempting bait for eels. Bull-heads are very common in the market of Montevideo; probably they are much larger there than those found in England.

Donovan.

In the northern parts of Europe, and in Siberia, they attain the length of six or seven inches. Ugly as this fish appears, after you have cut off its head, the largest are very nutritive, and prove excellent eating. They are most easily caught by the smallest hook, and red worm without float, letting the bait drop directly before them. They are found in small gravelly brooks, lying on a flat stone, or gravel, in warm days.—*Editor.*

The bull-head is eaten also in Italy, as *Mr. Riso* says; and *Pallas* tells us it is used by some Russians, as a charm against fever, while others suspend it horizontally, carefully balanced by a single thread: and thus poised, but allowed freedom of motion, they believe that this fish indicates the point of the compass from which the wind blows. In Switzerland the children spear them.—See a very ingenious description of the bull-head, (whose second name is miller's thumb,) in the celebrated—*Yarrell's History of British Fishes*, which is a very interesting book.

STICKLEBACK.



This fish, with the *prickles* cut off, is said to be equal to the minnow, as a bait, and even superior in pond-fishing, for perch; *Walton* considers them preferable bait, as they are capable of whirling round quicker; there is one singularity in the spawn of the stickleback, its ova are bigger than those of the cod-fish. *Daniel.*

Mr. Pennant observes, — there is such an amazing quantity of sticklebacks in the fens of Lincolnshire, that they are used to manure the land,—men were paid three shillings per day for selling them at one shilling and sixpence per bushel.

Gmelin likewise says, they are used to fatten ducks, about Dantzig. They are frequently found amongst the sprats and herrings. The stickleback on the continent generally is of the length of three inches,—it rarely lives more than two years, and is greatly tormented with worms.

Donovan's British Fishes.

Mr. H. Baker informs us, in the *Philosophical Transactions*, that this little fish (stickleback) will occasionally spring to the height of a foot out of the water to get over stones and other obstacles. Mr. Baker kept one for some time, which, in five hours did devour seventy-four young dace about a quarter of an inch long, and of the thickness of a horse-hair.

Mr. Aderon confined a stickleback in a glass jar, with sand at the bottom; at first it would not eat, but afterwards it ate out of the hand. A small fish was put in, which the stickleback instantly devoured, and, when satiated with food, it would fly at the hand that fed it.

Phil. Transact.

Sticklebacks are active in their movements, and extremely pugnacious. A writer in the *Magazine of Natural History*, has described their behaviour, under confinement, in a large wooden vessel; at first they swam about in a shoal,---suddenly one took possession of one corner of the tub, or of the bottom, and instantly made an attack upon his companion; whenever they meet with any opposition, a regular battle of the most furious kind ensues, and frequently one kills the other by ripping it up.

THE EEL.

The natural history of Eels has created much interest, particularly their generative system, which has been so ably noticed and treated by *Mr. Yarrel.* In point of nourishment they are one of the most important of the fish tribe. Their haunts are about flood gates, in clefts and holes, under roots and stumps of trees, large stones, and wooden bridges, &c. &c.

The methods of catching the eel are numerous. Eels are very troublesome when hooked in angling for other fish, with rod and line; they frequently destroy the hook and end of the line. The largest are taken by night lines; they are caught by bobbing, spearing, sniggling, &c. &c. The best way of killing them, when taken, is by separating the back bone. Eels migrate to the salt water to deposit their spawn. Very fine eels are to be caught at Dagenham Breach. *Editor.*

Migratory Habits of Eels.—At the locks at Teddington and Hampton young eels are to be

seen ascending the large posts of the flood gates in order to make their way. When the gates have been shut longer than usual, those which die stick to the posts, others which get a little higher meet with the same fate, so that they form a layer for the passage of the rest, a curious instance of their migratory disposition. Near Bristol there is a large pond, and on the bank between the waters there is a large tree growing, the branches of which hang down into the pond; it is by means of these branches that the young eels ascend into the tree, and from thence let themselves drop into the stream below; a friend of mine, who was a casual witness of this circumstance, assured me that the tree appeared alive, and the rapid and unsteady motion of the boughs did not appear to impede the progress of the eels. Eel fairs take place in April or May, when the fish go down to spawn.

Jesse's Gleanings in Nat. Hist. 2nd Series.

Natural History of Eels.—One of the most interesting investigations on fish is that of *Mr. Yarrel*, on the generation of the eel. This *vexata quæstio*, which has occupied the attention of naturalists, from Aristotle downwards, has been at last set at rest by Mr. Yarrel, who has proved, by actual examinations and dissections, carried on through eighteen months in succession, upon specimens of eels procured from different parts

of the country, that it is oviparous, having melt and roe, like other fishes. He has traced them down to the brackish water, whither they go generally, though not universally, to deposit their spawn, and he has followed the young in their extraordinary spring journeys up the great rivers, and into the brooks and rivulets in which they seek out for themselves appropriate haunts. In numbers they are immensurable; the shoals advance up the stream, forming a black line along the shore; nor are these journeys confined to the water, they cross fields, and climb posts and pales, in order to reach the place of their destination.

Brit. Association, Cambridge, July 13, 1833.

Eel Ponds.—Several ponds are appropriated in England to the raising of eels, and considerable numbers are taken in the Thames, and other rivers, but by far the largest portion come from Holland.

Hermaphrodites.—In the Transactions of the *Royal Academy* of Sciences at *Stockholm*, is an account of an eel, *gadus lota*, in which eggs and soft row were found at the same time. It is by Professor *J. G. Pipping.*

On the river, near Hasted, a large eel was caught, which measured five feet nine inches in length, and eighteen inches girth; and weighed upwards of forty lbs. *Hasted's Kent.*

Common eels will grow to a large size; they are noticed by *Mr. Pennant* sometimes to weigh twenty pounds; one was taken out of the Kennet, near Newbury, which weighed fifteen pounds. *Walton* mentions one, caught near Peterborough, which was a yard and three quarters in length.

About Michaelmas, 1741, at an eel fishery in Thelwill, Cheshire, the fishermen caught in one night a ton weight of eels, which were supposed to be striving to go down to the sea.

Kirby's Anglers' Museum.

A curious fact in the history of the eel, is, that a number of them, both old and young, were found in a subterraneous pool at the bottom of an old quarry, which had been filled up, and its surface ploughed and cropped for a dozen years. *Wernerian Society*, 1808.

The *longevity* and *abstemiousness* of eels was ascertained in 1812. John Meredith, an officer of the Excise, who resided in a cottage at Lanvace, Brecon, in 1781, put a small eel into a well in his garden; this well is about nine feet deep, and three in diameter, but seldom contains more than two feet of water, without the River Usk is swelled by floods. On a recent inundation, the eel above mentioned appeared on the surface, and was caught in a pail; when, to use the

language of Margaret Price, the present tenant of the cottage, and Swansea carrier, " it was as thick as her arm," and coiled round the pail, from bottom to top ; it was replaced in its former element, where it had subsisted for thirty-one years, upon the animalculæ contained in the water.

The eel was anciently said to possess the power of enforcing sobriety upon the most devoted subject. " If you would make some notorious drunkard to loath and abhorre his beastly vice, and for ever after to hate the drinking of wine, put an eel alive, into some wyde-mouthed bottle with a couer, hauing in it, such a quantity of wine, as may sufficee of it self, to suffocate and strangle the eel ; which done, take out the dead eele, and let the partie whom you would have reclaymed, not knowing hereof, drink of that wine only as much as he listeth."

On the 4th of August, 1807, a blind man, of the name of *John Jones, of Tarporley*, near Chester, caught an eel with a line, out of a pit, which eel measured three feet seven inches in length, the girth was nine inches, and the weight six lbs. The fact is extraordinary, when we recollect how troublesome it is to the angler to land a small eel when hooked.

Supplement to Daniel's Sports.

Pet Eel.—One of the inhabitants of the pleasant village of Darvel had, for a number of years past, kept a pet eel in a well in his garden, which eel is said to have become perfectly tame, answering to the name of Rob Roy, and readily eating morsels from a horn spoon pushed below the surface of the water by the children; some days ago a large frog leaped into the well, but no sooner had he ruffled the surface of the water by his plunge, than the eel darted at him, and succeeded in getting his head and shoulders into his mouth, but the body of the frog proved too much for his gorge, and, as his teeth prevented him from releasing his hold --- suffocation was the result: both animals were found dead at the bottom of the well. *Ayr Observer.*

Dr. Bloch asserts that eels, in the mouth of the Baltic, are taken in such quantities, that they cannot be used fresh, but are smoked and salted for sale, and conveyed in waggon loads to Saxony, Silesia, &c. The general size of the eel is from two to three feet, but they have been known to have reached six feet, and to weigh twenty pounds.

Eels and carp may be carried a long way when frozen in winter, and they are not dead.

A large eel was caught in the Schelde weighing fifty pounds. *Sunday Times*, 1834.

Nourishment derived from eels, and a superior manner of dressing them.---The lake of Commachio is one hundred and thirty miles in circumference, and is divided into forty basins, surrounded with dikes, which abound in fish, but more particularly in eels, from which the inhabitants enjoy an extensive commerce with all Italy. Each basin has its chief, or factor, who has many fishermen under him, and although the fishing takes place only at certain times of the year, it yet requires the fishermen to live there entirely. They are true Ichthyophagi, as they live upon nothing but fish, principally eels; they dress them in the most simple manner, by cutting them open from the head to the tail, to take out the intestines and dorsal spine: afterwards they put a little salt on them, and broil them, turning them two or three times, until they are done, using no butter, the fat of this fish making the sauce. *Spallanzani* tasted the eels so dressed; he says: they are most delicious, and easy of digestion. The fishermen cook them the instant they come out of the net. These men live in the midst of marshes, and have no other food than fish; they enjoy perfect health, equal to their neighbours who eat meat. There are many among these latter, whose constitutions are weak,

and threatened with consumption, who are sent to these marshes for the recovery of their health, and live upon fish with the fishermen; these men are particularly occupied two seasons of the year. The first is termed *La Montée*, when the eels are small, and enter the basins, in which they are assisted by the fishermen, and when the eels are grown, and seek to go out, the basins are opened from February to April, and this is called *La Descente*. For a very interesting and most particular treatise on eels, see *Spallanzani's Voyage to the two Sicilies.*

THE LAMPREY.

This is an eel-shaped fish with seven breathing holes on each side of the neck, and somewhat oblong mouth, with many rows of yellowish pointed teeth; these fish are of a dusky colour marked with a dirty yellow, and often attain the weight of three or four pounds; they are in season in the spring, when they ascend the river from the sea, and are of a most delicious taste; The Lamperey is a smaller fish, resembling an eel, blackish on the back, with blue on their bellies, they have the same holes on the neck as the lampreys. The lampreys taken in the Severn, between Worcester and Gloucester, are particularly large and excellent. The edges of the mouth being jagged, it enables them to adhere more strongly to the stones.

A lamprey weighing three pounds was taken out of the Esk; it was found adhering to a stone of twelve pounds weight suspended by its mouth, from which it was forced with no small *difficulty*. Lampreys sometimes weigh four or five pounds. *Pennant.*

INTERESTING NOTICES,

PRINCIPALLY RELATING TO FOREIGN RIVER FISH.

ANABAS.

A small fish in Tranquebar has a peculiar celebrity in climbing trees,---it is noticed in the Linnæan Transactions.---It creeps on the ground by the inflexion of its body. The anabas is brought alive to the markets of Calcutta, from Yazor, a distance of one hundred and fifty miles.

Cuvier's Animal Kingdom, by Griffiths.

ANCHONETTA.

A small delicate fish which swarms in the lake of Chucuito, in Peru, it is a species of cockerel.

Thompson's Alcedo.

A NEW FISH—THE AZURINE.

This fish is very similar to the red eye, but it is distinguished by the silvery whiteness of the abdomen, and by its white fins, it also differs in the number of fin-rays; its flavour resembles that of the perch,---the food and baits used for its capture, are the same as those used for catching carp; its weight does not exceed one pound.

Yarrell's Lin. Trans.

ANCHOVY.

A few of these fish are caught every year in *Dagenham Breach*, with the net only.

BELUGA, OR GLANIS.

A large river fish in the Volga,---a species of sturgeon. The beluga is five or six yards long, and thick in proportion. The Volga also yields the esotrin, another very large fish, fat and delicious; it abounds besides with salmon, sterlitz, a most delicious fish. *Strahlenberg*, in his memoirs, notices the beluga, as the largest eatable river fish in the world, he had seen one fifty-six feet in length, and eighteen in girth.

P. H. Bruce.

Though the beluga is an inhabitant of the Black Sea, it is often caught at Presburg, five hundred German miles from the Danube; it is, perhaps, to free itself from animalculæ, infesting the Black Sea, that it goes so far, when it is not spawning time. *Mag. Nat. Hist.*

Glanis, or beluga, the largest fish in the Volga, is very troublesome to bathers; it makes its way through nets, and every obstacle, making room for other fish to pass in the spring; its length is from seven to eight feet, and it is very heavy.

Pallas' Voyage.

The beluga, though an inhabitant of the Black sea, quits it as the salmon does, for the rivers, to dislodge itself of certain vermin that infest its head, or body, which may be seen by the microscope; the vermin is larger than the mites of cheese. *Taube Beschreibung von Sclavonien.*

Thus does Providence commission a reptile, apparently of the meanest order, to provide for the necessities of men, and to establish, by conducting them to his haunts, his control over the inhabitants of the ocean.

Plin. Nat. Hist.

Bathurst River described as excellent in a peculiar fish.---One man, in less than an hour, caught eighteen, one of which was a curiosity, from the beauty of its colours, and immense size; in shape and form it most resembled a cod, but was speckled with brown, blue, and yellow spots, like a leopard's skin; its gills and belly a clear white; the tail and fins a dark brown; it weighed seventy pounds, and without the entrails sixty-six pounds; but what is rather singular, in none of these fish was any thing found except a shrimp or two. Dimensions:—

	Ft.	In.
Length from nose to tail	3	5
Circumference round the shoulders..	2	6
Fin to fin over the back	1	5

	Ft.	In.
Circumference near the anus	1	9
Breadth of the tail	1	1½
Circumference of the mouth opened	1	6
Depth of the swallow	1	0

Extract from Oxley's Expedition in the interior of New South Wales, 4to. p. 24.

BINNY.

This is a fish found in the Nile. Its excellent taste may vie with that of any fish caught in any river which runs into the Mediterranean or ocean. It is not without its singularities, yet its form and colour are the most simple. Whether it is the Latus or Oxyrinchus of antiquity, both fishes of the Nile, I am not naturalist enough to discover. The fish alluded to weighed thirty-two pounds, but is often caught at seventy pounds and upwards. The whole of its body is covered with silver scales, much resembling silver spangles; they lie close together. Its eye is large and black, with a broad iris of white, stained with yellow; and it has the power of moving its eyes backwards or forwards at the same time.

Method of fishing for the Binny.—They take a quantity of oil, clay, flour, and honey, with straw, and something else, which makes it stick together; then knead it, until it makes a perfect

mixture, and will adhere firmly together. They then take two handfuls of dates, and break them into small pieces, and stick them in different parts of the mixture, which now adheres together, like Cheshire cheese. In the heart of this cake they put seven or eight hooks, with dates upon them, and a string of whipcord to each. The fisherman then takes this large mass of paste, and putting it upon a goat's skin blown with the wind, rides behind it into the middle of the river; there he drops it in the deepest part; then cautiously holding the end of each string slack, so as not to pull the hooks and dates out of the heap, he goes again ashore a little below where he had sunk the solid mass, when he gently separates the strings, and ties them to palm branches; to the end of every one of which hangs a bell; the oil resists the water for some time; at last the cake dissolves, pieces fall off; the dates, dipped in honey, flow down the stream, and the large fish below ravenously catch them as they pass. The fish follow these pieces up the stream, till they get to the cake, when they voraciously seek the dates buried in the composition. Each fish that finds a date, swallows it together with the iron hook, and feeling himself fast, endeavours to make off as speedily as possible; the consequence is, he pulls the palm branch, and rings the bell fastened to it. The fisherman runs immediately to the bell, and secures the fish. Frequently, not one

hook is found empty. As the fish will not keep in this country, a large hook is fastened through the upper jaw; and then fastened to the shore. Two fish dined our boat's crew.

Bruce's Travels, 4to. vol. v.

BAGRE.

A fish which abounds in most of the rivers of America. The skin has no scales; it is smooth, grey on both sides. The head of this fish is large, the snout flat, and furnished on both sides with barbs like a barbel; it is of a yellowish colour, of a very delicious taste, with few bones.

Thompson's Alcedo.

CAPITAN.

A very savoury fish found in the rivers of New Grenada. It has been remarked that when the bones of the head are separated, each one represents one of the passions of the Redeemer, viz. the spear, the cross, nails, &c. &c.

Thompson's Alcedo.

CIEGO.

A delicious savoury fish in the river Guyaquil. It is called ciego, because it appears blind, having no visible eyes, though it escapes when it thinks proper. It is a hand and a half in length, and has no bones. *Thompson's Alcedo.*

CURBINATA.

A fish found in the rivers and lakes of America, remarkable on account of its having above each eye a white transparent stone, of the size of an olive stone, which possesses very great virtue in urinary complaints, and dissolving stones in the bladder; hence it is much sought after. Hernandez calls it the parou.—*Thompson's Alcedo.*

CUSK.

A fish so called at New Brunswick, and considered excellent eating, is there caught in the rivers. I have not seen it elsewhere. It somewhat resembles the white fish of the Canada lakes, but is less in size, and quite a new species.

M'Gregor's British America.

DRUM FISH.

Mr. J. White, lieutenant in the United States, says, in his voyage to the China Seas in 1824, that being at the mouth of the Cambodia river, himself and his crew were astonished at hearing from the bottom of the ship extraordinary sounds, like bells, the bass of an organ, enormous harp, &c. &c. These noises increased, and formed a universal chorus, over the entire length of the vessel. The interpreter told Mr. White they were produced by fishes, of an oval or flatted form, which adhere to bodies by the mouth. *Humboldt*

mentions the same occurrence, but did not know the cause.

THE FISH OF THE EAST INDIES.

In the river Ganges they have the rooee, a species of carp; and the cutlah, a kind of perch. These often weigh thirty or forty pounds. The meergy, having fewer bones, is preferable to the rooee. The finest fish, however, is the sable, in flavour like the salmon; it rarely weighs more than four pounds. The cockup is the salt-water pike. I once saw a cockup taken near Dacca that measured eight feet, and required four men to carry it.

Williamson's Oriental Field Sports, vol. ii.

Fish abound in the bays of *East Falkland Island*. They took the hook, being of a kind between the mullet and the salmon. Their flavour was excellent, and when salted they were considered superior to the cod. Many ship loads might be procured annually.

Martin's Brit. Col. vol. iv. p. 511, 512.

GRAINING.

This fish is more slender than the dace; the body almost straight; the colour of the scales is silvery, with a bluish cast; the eyes are ventral, and the anal fins are of a pale colour. This fish is to be found in the Mersey, below Warrington.

It is fished for with artificial flies, like the dace; it rises freely, gives good sport to the angler; and when in the humour, it is not difficult to fill a pannier with these fishes. They seldom exceed half a pound in weight, and are much better eating than the dace: their length is about nine inches. *Bainbridge's Fly-Fisher's Guide.*

A very particular account of this fish is given by *Mr. Yarrel*, in the *Linnean Transactions*, vol. xvii. pt. 1.

HAWSONS, *or* HUSONES.

A very large river fish, found in the Danube, twenty feet long; it is caught in Schut Island, between Presburg and Komara. Some think it the same fish which *Œlian* names Antacetus. It exceeds all others in largeness. *Johnstonius.*

Herrings in Fresh Water.—In Virginia the herring ascends the rivers, even up to the most minute branches, as far as it can reach. A recent traveller observes, it is almost impossible to cross the fords on horseback without treading on them.

Dr. M'Culloch.

Mr. Franklin moved the spawn of herring from one river to another, and they always were to be seen in both rivers, in the season.

HASSAR.

Dr. Hancock, a distinguished ichthyologist, says of the hassar, "this is one of those species of fishes which possess the singular property of deserting the water, and travelling over land. In these terrestrial excursions large droves of them are met with by the Indians, during dry seasons, for it is only then that they are compelled to this dangerous march in search of water, which exposes them to so many enemies.

Fish Nest.—The hassar makes a regular nest, in which it lays its eggs in a flattened cluster, and covers them over most carefully; it remains by the side of the nest until the spawn is hatched, with as much solicitude as a hen guards her eggs; both the male and female hassar courageously attack assailants. The *round-head* hassar forms its nest of grass, and the *flat-head* of leaves.

Zoological Journal, No. 14.

Some *Indian fish live out of water* for a considerable time; numbers of travellers have confirmed the fact; it is owing to the peculiar construction of their gills, by which they are enabled to take up and retain a supply of water sufficient to keep up respiration during their absence from that element. It is well known to what an extent this power is enjoyed by eels.

As soon as the wet season commences, the East Indies are abundantly supplied with fish. The rain falling in such abundance as to cover the earth, verdure commences within twenty-four hours; and in the hollow or low parts ponds are formed, and so plentifully supplied with fish, that nets are used to catch them for the table.

Dr. Anderson.

Fishes at Ilmen, and the mode of curing them.—At lake Ilmen, near Valdai, they have a fish like a herring, and also another resembling a smelt. They prepare them for a distant market, by putting them in ovens of a different temperature, and gradually but thoroughly drying them.

Captain Jones' Travels in Norway.

Why might not the same method of curing other fresh-water fish be adopted in this country?

Editor.

Fish in Jamaica are supplied abundantly, and in great variety. Many of them are large and rich, but their flesh is in general soft and pulpy, and none to be compared with our salmon. One small kind called the snapper, with various other sorts, are to be seen swimming about near the shore of the clear pellucid harbour, and under the numerous quays, in thousands. In the inland streams, the mountain mullet, a fine rich trout, is

the prevalent fish. The shell-fish are mentioned only to notice two species, the oyster and the black crab: the former literally *grows upon trees*, that is to say, they adhere to the branches of the willows that grow on the margin of the water, and in this state are brought into market, where they are sold at so much per stick; their shells generally resemble the muscle rather than the pandore; they are very sweet and wholesome nevertheless: the black crab (which resembles exactly the Scotch parton, but smaller, and darker in the colour) is considered a great delicacy in Jamaica; the habits of this animal are a great puzzle to the West Indians; they are found in all parts of the interior, and supposed to migrate every year from one side of the island to the other; they are often met in hundreds together, slowly traversing the country; at these times it is dangerous to meddle with them, for if they should fix upon man, mule, or horse, nothing but wrenching their claws from their bodies will make them quit their hold: it is a curious circumstance, that during these migrations nothing can make them swerve from their path—be the obstacle trees, stones, or precipice, they go direct over it, by means of their adhesive claws; whilst sojourning on the sea-shore, they burrow in holes like rabbits.—*Chambers' Journal*, No. 58.

In the *collection* of the late *Sir W. Raffles* was a *new species of julis*, which, from its coloured

markings, Mr. Bennet named the julis argus, or peacock fish, the sides and fins being studded with beautiful ocelli similar to the peacock's tail.

Mirror, vol. xxv.

FISHES OF NEW YORK.

A monstrous river fish of prey.—In the account of the expedition for exploring the country between the rivers of St. Lawrence and Saguenay, published in the *Appendix to the Journals of the House of Assembly*, 1831, the following passage appears: "We embarked at the point of the Baie des Roches, north shore of the St. Lawrence, and we had not proceeded far when we were pursued by a monstrous fish of prey; in consequence of which we put to shore again. This animal was four hours about us, as if watching us; it came sometimes within twenty feet of the rock on which we were, it was at least from twenty to five and twenty feet long, and shaped exactly like a pike; its jaws were from five to six feet long, with a row of large teeth on each side, of a yellowish colour, it kept itself sometimes for near a minute on the surface of the water. I am not aware that any fish of the above description has been seen in the Gulf of St. Lawrence, or in the Lakes of Canada. Also, after mentioning as inhabitants of these lakes, the fish common to their country, they add the tyrant of these lakes, with a bill of about a foot

long. Trout, all sizes, weighing from fifty to seventy lbs.; a fish called the masquenougé, of a most delicious taste, weighing about fifty lbs.; and the sturgeon, weighing from seventy to one hundred lbs., affording isinglass, but different from the sea sturgeon, wanting the shelly scales on the back; the lake herrings are plentiful.

M'Gregor's British America.

SHEEPS-HEAD.

Dr. Mitchell observes, in his account of the fishes of *New York*, that the sheeps-head is served up in the most sumptuous tables, and does not yield in flavour to any fish, the trout and salmon excepted. It weighs from four to seven lbs.; its price is from a dollar to a dollar and a half; some have been seen to weigh fourteen lbs. Dr. Mitchell says, "nothing can surpass in the opinion of a native of *New York* a sheeps-head boiled."

WEAK FISH.

One of the most abundant fishes in *New York*, and that which principally supplies the table, is about sixteen inches in length, to be found where they catch the basse.

PACOU.

The pacou is the richest, and most delicious and plentiful fish in all Guiana. It does not take

the hook, but the Indians sometimes decoy it to the surface of the water, by means of the seeds of the crabwood tree, and shoot it with an arrow, which has hardly left the bow, when the Indian plunges into the water after the fish, which is struggling with the arrow. The Indians seldom missed the fish aimed at.

Watterton's Wanderings in South America.

Palmide.—This fish resembles veal when roasted. It is only to be seen at table roasted in slices, and is considered very good.—*Sketches of Corfu.*

PRENADILLA.

A small delicious fish, in the lake of Cuicocha, in the kingdom of Quitto, about an inch long, and destitute of scales; the prenadillas are caught and pickled for exportation, from which trade the Indians derive great gains. This fish, a species of boguilla, is perhaps the cuitlapeth of Hernandez. *Thompson's Alcedo.*

Sailing Fish.—There is at Singapore a fish, called by the natives ikan-layer, of about ten or twelve feet in length, which hoists a mainsail, and often sails very swiftly, in the manner of a native boat. The sails are formed from the dorsal fins.

Mirror, vol. xxv.

The natives of *Sinde* believe that *fish-diet* prostrates the understanding; and in palliation of ignorance in any one, they often plead, he is but a fish-eater. *Mirror*, vol. xxv.

SOUBATKA, A RARE FISH.

In the autumn there is to be seen in the River Airgoun, in Mongolia, a very rare fish, named by the Kossacks soubatka, from the number of its teeth; its body is about an ell long, and one foot in width, its back is humped towards the head, its width diminishes towards the tail, on which it has large fins; it is of a bluish colour, its scales are very small, its teeth very strong, the two front teeth and the grinders are larger than the rest, and a little curved.

Pallas' Voyage, 4to. vol. iv.

SPARUS.

A fine specimen of the four-footed sparus of Donovan was lately captured, by a carrier, in shallow water, at Cambois Burn. It measured five feet three inches in length; and weighed seventy-nine pounds, being three pounds heavier than any previously seen by naturalists; it is considered a very rare species in the British seas.

Newcastle Journal, *Nov.* 23, 1833.

SOLOMJIANKA.

The lake Baikal yields a fish peculiar to it; they call it solomjianka. This fish resembles a lump of fat. When put on the gridiron, the oily fat with which it is filled melts, so as to leave nothing but the bones. It is never taken in nets, nor has it ever been seen alive. It is supposed to reside only in the gulfs of Baikal. It exists in the centre of the lake, which is very deep: lines of three or four hundred feet have failed to reach the bottom. These fish are sent to the surface when the lake is much agitated with high wind; they are then thrown on the banks, in such quantities as to form a parapet on the shore. This proves a rich harvest for the inhabitants, who extract an oil from them which they sell to the Chinese. *Pallas* had twice some sent him to Posolsk. The gulls and crows will not eat them. A slight pressure with the hand makes them melt to oil.

Pallas' Travels in Russia.

LARGE STURGEON.

Three large sturgeons taken in the river Nyn, near Peterborough. One at Allerton mill, seven feet nine inches in length, weighed one hundred and twenty-three pounds. Another at Castor mill, was eight feet two inches in length, and three feet in width. Another was five feet nine inches long. *Morton's Nat. Hist. Stafford.*

In the year 1829, a large sturgeon was caught and landed at Bushley Meadows; it was seven feet in length, two feet ten inches in girth, and weighed one hundred and twenty pounds.

Dr. Hasting's Nat. Hist. Worcestershire.

There was caught in a stake net, near Findhorn, Scotland, a sturgeon, eight feet six inches long, three in width, and weighing two hundred and three pounds.—*Barrow's Worcester Journal, July*, 1833.

Catesby informs us, that in North America sturgeons appear in great abundance, in May, June, and July, occasionally springing out of the water some yards high, and falling on their sides; their fall may be heard at a distance of some miles. In Virginia they are so numerous, that five or six hundred are taken in the space of two days, by merely putting down a pole with a strong hook at the end, and drawing it up again, on perceiving it to be rubbed against by a fish.

Sturgeon Fishery.—This fishery is carried to a great extent in the Volga and in the inlets of the Caspian sea. It yields on an average 1,760,405 roubles yearly. The Persian fishery of the sturgeon is reported to produce 200,000 roubles yearly. *Forster* says, sturgeons are seldom found in summer, but mostly in winter, under the ice.

Caviar is made from the eggs, and isinglass from the sounds of this fish.—*Phil. Trans.* vol. lvii.

The river Zongouska, in Siberia, abounds in sturgeons. The inhabitants of the neighbourhood sell a great quantity yearly to D'Ilmsk, D'Leniseisk, and D'Irhoutsk. The most favourable time for fishing is when the river is gently frozen. They make use of a rod or pole, about four or five feet long, at the extremity of which they fix an iron, with two branches curved or bent, but round, about half a foot from each other, and a sharp point coming out between the branches. When they fish, they break the ice, and put the rod into the holes, at the deepest part of the river, and continue to sound different places, until they have found the sturgeons. As soon as they have found the fish, they go into the branches, two at a time, (that is, two in each branch), until the whole are caught. They take at a time from two to three hundred. If any are injured, and blood issues from the wound, the fishing immediately ceases, as the fish all leave the place.

Gmelin, Voyage en Sibérie, vol. i.

This river (Medway) was formerly well stored with salmon and sturgeon. The Bishop of Rochester derived a valuable part of his revenue from the fishing for sturgeon. One was caught near Maid-

stone, in 1774, that was seven feet long, and weighed one hundred and sixty pounds.

Daniel's Rural Sports, Sup.

Sturgeon Eggs.—The fishery of the Caspian sea, about the mouth of the Volga, is of the highest importance. Amongst the great variety of fish in which this river abounds, the sturgeon is not the least considerable. Its eggs afford what the Russians call *ikari*, and the Italians *caviar*.

P. H. Bruce.

Curious Fishes in Surinam.—The grey munik, three feet long, like a salmon in shape, but larger scales, and thicker in the body; its flesh is white and delicate. Yellow-back is often brought to market at Paramaribo; it attracts much attention from strangers; its back is of a saffron colour, and its belly white; it has a large head, with long whiskers; body small, without scales. The wrapper is one foot long, and of good taste. The lumpe is much esteemed for its taste; it is about a foot and a half long; large head; body marked with black longitudinal stripes. The peri grows to the size of two feet, flattish shape, large head, wide mouth, very sharp teeth, a fin on each side of the belly, and one on the back and at the end of the tail; scales shining blue; lives in fresh water; very rapacious; its jaws very strong: persons bathing frequently lose their toes or fingers, &c.: the

Indians do not fear it; they keep themselves in constant motion. The quee-quee is covered with hard scales, of moveable rings. Four-eyed fish is a foot long, something like a frog; it has not four eyes, but under each eye is a part of an eye, which serves it, as a reflecting mirror, to observe what passes under the water.

Baron Albert Von Sach.

VENDISE.

This beautiful and delicate fish, of the salmon tribe, is entirely confined to Lochmaben, near Dumfries, although known in Switzerland and other parts of the Continent. It resembles the herring, but has a far more agreeable flavour. It measures from four to ten inches. Its back is green, and covered below with silver scales. The forehead of the vendise is pellucid, and bears the shape of the human heart. The unfortunate Queen Mary is said to have introduced it into Lochmaben from the Continent. This fish is a famous bait for pike. It dies the instant it is taken out of the water.

NONDESCRIPT FISHES.

Mr. Pennant gives an account, in his View of Hindostan, of a small fish, always to be found in the rainy seasons in places where it was dry before: it is in high estimation. He also mentions a fish found about the Foundling Hospital, when

it was building, and when there was no connection with any other water.

Captain Mudge, while employed in the trigonometrical survey, stated, that a few days before he left Shetland, he received a letter from a gentleman of property there, that a fish of very singular appearance had been taken off the island of Unst. The fish was to have been sent to Captain Mudge, but did not arrive in time. It was of the flat species, about four feet long, and was most amply provided with fins; but its distinguishing peculiarities were two *antennæ*, or feelers, about eight or ten inches long, standing erect from the head, each crowned with a fine tuft resembling a flower; whilst on the under part, near the breast, were two hands, exactly resembling the human hand, except that they were palmated or webbed.

FISHING AS PRACTISED IN DIFFERENT PARTS OF THE WORLD.

FISHING AS PRACTISED IN DIFFERENT PARTS OF THE WORLD.

Lobster Fishing in North America.—The harbour of Halifax is one of the finest in the world; its deep waters abound with fish of every description (except soles). Fish is daily to be purchased at the market at a most astonishing low rate, generally from a halfpenny per lb., and the finest lobsters may be had for a halfpenny each; but our object in these fishing parties, consisting of gentlemen and ladies, was not only to fill our baskets; they were a kind of pic-nic. The period selected was generally at the full of the moon; but when her light was clouded on one of these cool calm evenings which succeed the hot days of an Indian summer, we chose our ground, and lowered sail, and pulled up under the shade of a lofty uninhabited building, situated on Melville Island, which lies in the Sound. Under these rocky shores we commenced our operations, with about four or five feet water. The implements were not very complicated; in the bow of the boat was placed a large grating, with a long handle, like a gigantic frying-pan; this is supplied with large thick pieces of a kind of millboard, which, when lit, burns fiercely, and casts

a very powerful light. The weapons for capturing lobsters, termed spears, resemble the props of a clothes line, only somewhat more *artistically* shaped; they are from six to seven feet in length, and nearly an inch in diameter; at one extremity they are split down nearly six inches, the prongs thus formed are kept asunder by a small wedge. The boat is tilted on one side, so as to bring the gun-whale quite close to the water's edge, and a blazing fire lighted on the grating, makes the smallest objects visible beneath the wave; myriads of lobsters are thus discovered crawling in every direction. Their being disturbed by the sudden glare, causes a great deal of confusion amongst them. The prongs of the weapon are quietly inserted in the water, and gradually lowered until within a few inches of the lobster; the fisherman darts his spear on the shoulders, wedging him between the prongs, and brings him out. In a short time, not more than one hour, the boat was filled. *New Sporting Mag. June*, 1834.

Indians Fishing in North America. — They catch fish with nets, hooks, and harping irons. They take also a fork of wood, with two grains or points, and set a gin to it, almost in the same way as they catch partridges in France; they put it into the water, and when the fish (which are in greater plenty than here) go to pass through, and find they are entered in a gin, they snap together

these pinchers, and catch the fish by the gills. The *Iroquois* make use of a net forty or fifty fathoms long; they cast it from their canoe, in an oval form; their dexterity in this is admirable. They take a great quantity of white fish, and bring them ashore with nets made of nettles; there are two men together; they take eels in the night, using the bark of a birch tree, with some earth on the end of a stake, after which they light a flambeau, which gives a clear light; then one or two go into a canoe with a harping iron, placed between two grains of a little fork; they strike a great number of eels, because the porpoises are pursuing them, but they are stopped by shallow water. *Henepin's Travels.*

Fishing on the Coast of Angoza, or Cabenda.—This fishery is conducted on a very extensive scale. They use a net, of nearly three or four hundred fathoms, and three or four in depth, made of strong materials. It is floated by buoys of the Lob-lolly tree, a soft spongy wood. A sweep is made, which seldom fails to bring out a large quantity of fish of all descriptions.

Edinb. Phil. Journal, vol. v.

Peculiar Method of Fishing at St. Antonio.—*Captain Foster* had no sooner landed than a solitary negro made his appearance; we had invaded his solitude; we soon made him acquainted

that fish and vegetables would be acceptable. The next minute he provided himself with a cane, armed at one end with a nail, and, to our surprise, plunged into the sea; here he continued floating and swimming about, supporting himself in the water with one hand, while with the other he made use of his weapon among the finny tribe. This was altogether a novel mode of fishing, but not so to him, for in the space of two or three hours he had caught six fine cavalloes, weighing nineteen pounds, besides several smaller fish.

Voyage of the Chanticleer, by Webster.

In the *Island of Arguin*, in Africa, the Dutch fish from January to July, and catch great quantities of the fish named old maids, which weigh as much as two hundred pounds, and which are salted and dried in the same manner as cod, with this difference—they will not keep above seven months.

Golberry's Voyage in Afrique, vol. i.

Winter Fishing for the Huso in Astracan.—*Gmelin* has related in a very lively way the solemn fishing that takes place for the Huso, at the beginning of winter, in the neighbourhood of Astracan, when these fish have retired into vast caves under the sea-shore, which form their winter quarters. A great number of fishermen assemble, over whom are placed a director and inspectors, who possess considerable influence and authority; every

kind of fishing is prohibited in the places known to be the haunts of the husos; a numerous flotilla of boats are in readiness; every thing is prepared as it were for an important military operation; all approach in concert, and with regular manœuvres; the slightest noise is interdicted, so that the most profound silence everywhere prevails. In an instant, at a given signal, a universal shout rends the heavens, which echo multiplies on every side. The astonished husos, in the greatest alarm, rush into the nets of every kind prepared to receive them.—The huso fishery is of great importance, principally on account of the caviar prepared from the roe of these fishes, and the isinglass made from the air-vessel. The caviar is in demand amongst the Russians and Turks, but more particularly among the Greeks. *Rev. W. Kirby.*

Fishing in the Baikal.—I observed in this neighbourhood the fishermen make use of nets of a singular construction, to catch the fish in the spring, as they come out of the bulrushes, reeds, weeds, &c. &c. They term it Kotsi, or fold, made from the branches of trees that extend over the water. An angle is formed by this means, with the use of osiers or reeds, into a large inclosure, which extends to two chambers; on entering which, the mouth being so constructed, there is no returning. *Pallas' Voyage.*

Fishing at *Battersea Bridge* and the other Bridges is best at the two last hours of ebb-tide, and the first hour of flood, at the starlings, taking care to fish in the eddy. In the fourth, fifth, and sixth arches, on the Surrey side, roach, dace, gudgeon, and sometimes barbel, used to be caught. Best bait, gentles; ground-bait, balls made of clay, graves, and bread.

Hassel's Sports of the Thames, p. 77.

At *Black Swan River*, *New Settlement*, western coast of New Holland, the natives angle or fish with mother-of-pearl hooks, and lines made from the bark of trees.

Lit. Gaz. 18*th Dec.* 1828.

Native Fishing River Wanyance, *Bokhara.*— Each fisherman is provided with a large earthen jar, open at the top, and somewhat flat; on this he places himself, and, lying on it horizontally, launches into the stream, swimming and pushing forward like a frog, and guiding himself with his hands; when he has reached the centre of the river, he darts his net directly under him, and sails down with the stream. The net consists of a pouch attached to a pole, which he shuts on meeting his game, draws it up, and spears it, and puts it into his vessel, on which he floats and prosecutes his occupation.

Burnes' Travels in Bockhara.

Fishing at the Cape.—A great variety of fish frequent the shores at the Cape; in consequence of which whole fleets of fishing boats go out from the Cape every day, and all return at two o'clock, the established hour for market. This regulation enables them to have fish in perfection. The fishermen of Capetown adopt a curious practice; they invariably smear their nets with blood, which is allowed to dry on them, and they consider that this entices the fish, and gives them a better haul.

Foster's Voyage.

Fishing in Canada.—The manner of fishing, as described by a Canadian, in the *Mirror:* Those living on the borders of the numerous lakes and rivers of Canada, (which abound with salmon, trout, eels, perch, &c. &c.), are provided with a light boat, or log, or what is best, with a bark canoe; a barbed fishing spear, with light tapering shaft, about twelve or sixteen feet long, an iron basket for holding burning pine knots, and capable of being suspended at the head of the boat; when fired on calm evenings, after dusk, many of these lights are seen stealing out to the best fishing grounds. The light seems to attract the fish; all around it they seem thickly congregated; in this manner fifty or sixty fish of three or four lbs. are speared in the course of the night. A little practice enables a young settler to take an active

part in this pursuit: very few fish are caught by the fly, excepting the black bass occasionally.

Martin's British Colonies, vol. iii.

Method of catching Caymen. — The Indian instrument to take the Cayman was very simple: it consisted of four pieces of tough wood, one foot long, and about the thickness of a finger, barbed at both ends. These pieces were tied round the end of the rope in such a manner, that if you conceive the rope would be an arrow, it would form the arrow's head, which was well baited with the flesh of the acouri, and its entrail twisted round the rope a foot above it. A print of this is to be seen in *Mr. Watterton's Wanderings.* He caught a cayman with this instrument, ten feet long, and rode upon its back forty yards, when they dragged it out of the water.

New Mode of Fishing in China.—Among the many amusing scenes which strike the eye of a European, on his first visit to China, is the ingenious mode of fishing practised near Canton.

At the stern of their punt-like boats, a small mast, like a flagstaff, about eight feet high, is fixed. To the top of this a block is made fast, having a sheaver to carry a 1½ inch rope. One end of this rope is fixed to a bamboo pole twelve or fifteen feet in length; it is hoisted higher

or lower, as is wanted. The butt end of the pole is kept on board, and at the other end a light net, about eight feet square, is slung, being kept distended by two slender rods, fixed diagonally to the opposite corners, and bound together in the middle, where they cross each other, and where also they are fixed to the end of the swinging pole before mentioned. A stone is thrown into the middle of the net to assist it in sinking, so that it may, when down, spread out on the bottom of the river. When the fisherman thinks any fish are passing over the net, he suddenly hoists it above the water, and if he has made a capture, he swings the net on board to take out the fish; if none are caught, he drops it again into that, or some other place, even amongst barges; this plan might be useful in this country for carp-fishing, in ponds having steep and rugged banks, by taking the advantage of a tree, to which the pole and net may be slung, lowering it in the day time, and throwing thereon a handful of brewers' grains, or other bait: at night the fish would feed, and quickly hoisting the net, a fine shoal might be taken. Eels might be so taken in rivers.

A clear engraving of this net may be seen, with the above account, in *Mag. Nat. Hist.* vol. v. No. 27.

Extraordinary Fishing in Cirenitz Lake.—None of the curiosities of Germany are more surprising than this lake in Carniola. It is four or five miles long, and two miles broad, the most wonderful circumstance is its ebbing and flowing in June and September, when it runs off through eighteen holes, which form as many eddies or whirlpools. *Valvasor* mentions a singular mode of fishing in these holes, and says that when the water has entirely run off into its subterraneous reservoirs, the peasant ventures with lights into that cavity, which runs into a hard rock, three or four fathoms under ground, to a solid bottom; whence the water, running through small holes as through a sieve, the fish are left behind, and caught, as it were, in a net provided by nature. On the first appearance of its ebbing, a bell is rung at Cirenitz, on which all the peasants in the neighbouring villages prepare for fishing at these ebbings. An incredible number of pike, trout, eels, tench, carp, perch, &c. are caught. *Smith's Wonders.*

Fishing-Bird of China.—This bird is about as large as a heron. The Chinese fishermen train these fowls to catch fish, and to bring it to them; they are as tractable as hawks used to be in England. They perch on the sides of the boat, and at the word of command dive for their prey, and bring it into the boat, and so continue until the fisher-

men are satisfied. As fish is the natural food of these birds, the difficulty is to restrain them from eating, for which purpose they fasten a string round their necks, so slack as to suffer them to breathe; when the bird has done fishing for his master, the cord is taken off, and it fishes for itself. *Smith's Wonders.*

Fishing in China.—One of the common practices is to place a board painted white along the edge of the boat, which, reflecting the moon's rays into the water, induces the fish to spring towards it, supposing it to be a moving sheet of water, when they fall into the boat.

Loudon Encyclop. of Agriculture

Columbus is said to have observed, in the course of his voyage among the West India Islands, some natives fishing in a canoe. He was struck with the means they adopted, which was nothing more or less than a sucking fish, which they allowed themselves to fasten to a fish, and thus drew them both out of water.

Method of Fishing in Congo.—The mode of fishing is ingenious; having fixed on a shallow channel between the shore and a sandbank, a row of stakes is driven across to support a frame of wicker work, about three feet high; a small opening is left, in which a trap resembling a bird-

cage is placed; into this the different kind of fish enter in great numbers, and are taken; women and children are employed in smoking them for the rainy season. *Edin. Phil. Journal*, vol. v.

Fishing at Corfu.—There was a fisherman paddling about on the sea, he looked very picturesque in his white jacket and large straw hat, seated on a bundle of rushes fastened together, and moving about on the water with one oar; when he landed, he drew up his boat, and threw it over his shoulders; he had in his basket sea scorpion, porcine scorpæna, shrimps, crabs, mullet, &c. &c. *Sketches of Corfu.*

Extraordinary Method of Fishing by the natives of Cuba.—The fish employed was the sucking fish, or *remora*; a strong small twine was made fast round the tail of the fish, which was kept in a vat until its services were required, and then thrown overboard; it ran instinctively towards the first fish which its line permitted it to reach, and instantly made itself fast by its oval disk, or sucker at the top of its head; the moment the fisherman felt that such was the case, he gently drew in the line unto the surface; then carefully thrust his finger under the disk, which broke the connection, and secured the game; he then permitted the sucking fish to return again

to the water. We found this a most successful method of fishing. *Fish and Fisheries.*

Fernando Po Native Fishing.—A number of canoes, containing from three to twelve men, put out to sea to look for a shoal of fish; when discovered, they surround it on all sides, shouting and splashing the water with their paddles in every direction, endeavouring to drive it towards a centre. This done, they commence fishing, using for the bait a small fish, with which they are previously provided, and they occasionally throw a few of these into the shoal. The fish appear to take this bait very eagerly, but as the hooks which the natives use, are made of bone, wood, or nails, and without barbs, not more than half the number that are struck in the first instance are eventually secured; two men paddle the canoe in the direction of the shoal, while the remainder are fishing. *Captain Owen* was much amused and interested with their operations and success; they brought on board some very fine species of bream, from two to three lbs. each, caught in deep water at sea, by rod and line.

Holman's Voyage round the World.

New invention granted by authority, to catch fish that shall swim within one thousand yards of the land or shore, which may be used in all sea-

sons, when fishing boats, by the inclemency of the weather, cannot venture out.

Gent. Mag. vol. xiii. p. 496.

Fuegian Method of Fishing.—The Fuegians subsist principally by fishing, and have recourse to a remarkable expedient to supply the place of a hook. They fasten a small limpet in its shell to the end of a line, which the fish readily swallows as bait. The greatest care is then taken by them not to displace the limpet from his stomach in drawing the fish up to the surface of the water; and when there, the fisherman watches a favourable moment, and with great dexterity, retains the fish by the line in one hand, seizes hold of it by the other, and quickly lifts it into the canoe.

Voyage of H. M. S. Chanticleer.

Fishes fishing for one another.—The frog-fish, mouse-fish, angler, bellows-head, sea-devil, with several other names, belong to a fish which separately, from its fins, *Dr. Smith* describes very like a tadpole or pollywog; from the sides and angle of his mouth project numerous threads, soft, flexible, and terminating in bulbous extremities. Old writers assure their readers that these threads were fishing lines, and the bulbous extremities baits, which nature had provided for its use in angling. *Buffon* relates that this fish lies concealed in the weeds, allowing the lines to float

above its head, which so much resemble marine worms, that the fishes being deceived by them, are decoyed by the capacious vortex which is open to receive them.

Dr. Smith.—Fish and Fisheries.

Fishing Frog, or Angler—Lophius Piscatorius.—A strange fish has been exhibited round the town, in the course of the last two or three days, which was caught in the mud in this harbour; it proves to be the fishing frog. This extraordinary fish is five feet long, and the mouth when open is three feet in circumference; teeth long, rounded, and bent inwards, three rows in the upper, and two in the lower jaw; inhabits European seas. The curator of the Portsmouth Philosophical Institution has purchased it for the Museum.

Portsmouth Herald, Oct. 1833.

Fishing in the Ganges.—During the periodical rains the Ganges overflows its banks. After the floods have subsided the smaller fish crowd up the rivulets: a fisherman of an idle sort plies his dingy or punt, and when it grates the sand, moors it across the stream; with a long indented bone, something like a quail cull, he, in great unconcern, with his hubble-bubble, or googoru—a pipe so called for the bubbling it makes, in having the smoke drawn through a half-filled cocoa-nut shell—in one hand, and the musical instrument in the

other, creaks along the gunnel of the boat, and awaits the arrival of the invited: strange to say, his guests do arrive, and, finding the stream obstructed, throw themselves over into the lee-side of the boat, where there is a net, and where they get entangled in its meshes.—*Medwin's Angler.*

Glaciers' Method of fishing for Cod and other Fish.—Each boat throws out four or six floating lines, with hooks, at the prow; they agitate the water with their oars, which makes the fish bite, as they will not do so from the motion of the boat; they catch in a short time more than their boat will contain. *Glufsen's Voyages.*

Glass-fishing Net.—A patent was granted to the Marquis de Chabannes for a new apparatus for attracting and catching fish. A lighted lamp is sunk to the necessary depth in the water, and the case of the lamp has pipes attached to it that lead above the water's surface, for the purpose of admitting air to the lamp, and drawing off the smoke: the object of placing the light in the water is to attract the fish, for which purpose a box containing mirrors is connected with the lamp, and behind is a trap of nets, into which the fish are allured by the mirrors. There is a contracted passage of netting, which gives way to the fish entering, but closes against their return; in this

pouch the fishes collect, and are taken out by the fishermen when the box is drawn.

Gent. Mag. p. 11, 1822.

Greenlanders' Fishing Tackle.—Among the fishing tackle peculiar to the Greenlanders, their lines of whalebone are especially remarkable; they consist of whalebone split very fine, which are tied together, and often two hundred fathoms in length, and even longer: these lines are used in fishing on the ice, to catch a kind of hollibut, which is found only in the Greenland seas. The Greenlanders spear salmon and salmon-trout with a shaft, to which two bone or iron shafts are fastened.

Catching the Gymnotus.—This animal is a native of South America, and abounds in small streams in the vicinity of Calobozo, and in ponds, from the equator to the ninth degree of north latitude. *Humboldt* gives a very spirited account of the manner of taking this animal, which is done by compelling wild horses and mules to take the water; the Indians surround the bason into which they are driven, armed with long canes, or harpoons; some mount the trees whose branches hang over the water; all endeavouring, by their cries and instruments, to keep the horses from escaping: for a long time the victory seems doubtful, or to incline to the fishes. The mules,

disabled by the frequency and force of the shocks, disappear under the water; and some horses, in spite of the active vigilance of the Indians, gain the banks, and, overcome by fatigue, and benumbed by the shocks, stretch themselves at their length on the ground. There could not, says *Humboldt*, be a finer subject for the painter: groups of Indians surrounding the bason; the horses with their hair on end, and terror and agony in their eyes; the eels, yellowish and livid, looking like great aquatic serpents, swimming on the surface of the water in pursuit of their enemy. In a few minutes two horses were drowned, and others, with repeated shocks of the eel, sink under the water in a lethargy, and are soon trodden upon and drowned. The gymnotus is more than five feet long, and its electric organs are under the tail. *Rev. W. Kirby.*

Ichthyophagites—Native Fishers.—Sir George Mackenzie, in his journey from Canada to the Pacific, fell in with some perfect Ichthyophagites, who would touch no other food than fish. These people construct, with great labour and ingenuity, across their streams, salmon weirs, which are formed with timber and gravel, and elevated nearly four feet above the level of the water; beneath this machines are placed, into which the salmon fall when they attempt to leap over the weir. On either side is a large frame of timber work, six feet

above the level of the upper water, in which passages are left for the salmon, leading into the machines. When they catch their salmon, they string and suspend them at first in the river. The women are employed in curing these fish; for this purpose, they appear to roast them first, and then suspend them on the poles that run along the beams of their houses, in which there are usually from three to five hearths, the heat and smoke from which contribute to their proper curing.

Coal-fishing in Ireland. — The coal-fish requires a stiff breeze; and a dark sky is all the better; in its detail it is perfectly similar to mackerel fishing, only that the superior size of the coal-fish makes stronger tackle and a heavier lead indispensable; an eel seven or eight inches long is the bait; the head being removed, the hook is introduced as in a minnow, and the skin brought three or four inches up the snoud. This latter is a fine line, of two or three fathoms length, affixed to the trap-stick and lead, the weight of which latter is regulated by the sailing; four or five knots an hour is the best rate of sailing for killing coal-fish, and where they are abundant, the sport is excellent. The coal-fish varies in weight from two to fourteen pounds, is finely shaped, immensely rapid, uniting the action of salmon with the voracity of the pike; if he miss his first dash, he will follow the bait to the stern of the boat. For

mackerel fishing, the bait is the same fish, cut to the size of the herring fry: mackerels are very tender-mouthed. *Wild Sports of the West.*

Sand-eel fishing in Ireland.—The sand-eel are generally from four to nine inches in length, and lie beneath the surface, seldom deeper than a foot. The method of taking them is very simple; it is effected by passing a case-knife or sickle with a blunted edge quickly through the sand, which brings the fish to the surface, and, being luminous, they are instantly taken. Besides being considered a great delicacy, they are an admirable bait for flat-fish. *Wild Sports of the West.*

Peculiarity in angling at Galway.—The anglers are obliged to flog the water, the few feet of which they are fishing on, in the hope that some fresh-run fish might be induced to look at the well-dressed deceits playing on the streams.
Angler in Ireland.

Iceland Fishery.—There is a great quantity of fish taken on the coast of Iceland, of such fish as are generally known, but of a most extraordinary size. A flat fish was caught which weighed three hundred-weight. The most singular fish here is the sea-wolf, or, as the Icelanders name it, *steenbit*, that is to say, stone-eater, because, on opening the fish, a number of small stones or gravel are

always found in its inside. Cod-fish is their principal merchandise, which they exchange for most other goods they want; they fish with line and hook, and bait with raw flesh, or with the heart of a fish just caught.—*Tremarec Voyage in the North Sea.*

Iceland Salmon Fishery.—The salmon fishery in Lax Elbe afforded an extraordinary gay scene on the appointed day for catching the salmon, which is a regular festival, when all Reskiavik, and the country round far and near, assembled at a particular spot, to which the fish had previously been driven, and in such multitudes as would exceed belief. Nothing was to be seen but happy faces among all ranks, men, women, and children, of all ages and conditions; and with regard to the fish, the men and women had only to wade into the pool, seize the fish in their arms, and heave them out upon land, where others collected them in wooden panniers, to be conveyed to Reikiavik, and there prepared for drying and salting. It was not unusual to catch from two to three thousand in one day. After this the fish were caught in a more rational way, once or twice a week, according to the demand; the quantity of fish did not appear to be diminished in this river; it was still a curious sight to see multitudes of large fish at the foot of the falls in the river. A little way below the falls, a kind of weir was formed of large stones, and two or three wooden boxes, with open-

ings sufficient to let the fish pass through in going up; and being narrowed at the other end, and spiked in the form of a mouse-trap, the fish could not possibly return; four or five hundred are caught weekly. Two anglers applied their lines, with every variety of beautiful flies, but without the least success. The trout, however, were not so dainty; several were hooked and landed.

Barrow's Iceland.

Fishing in Lapland.—The water was very clear at Hummerfest; you may see every thing that goes on amongst the fish. A few feet down you will see the young cod snapping at your hook, if you have one; a little lower, the coal-fish and the huge plaice and hallibut, on the white sand, at the bottom. In other places, the star-fish, as large as a plate, and purple and green shell fish, of all sizes. The plaice is taken in the following manner. In calm weather, the fisherman takes a strong fine cord, to which he has fastened a heavy spear-head, like a whale harpoon; this he holds ready over the bow of the boat, while another person paddles it forward slowly; when the fish is seen at the bottom the boat is stopped, and the harpoon is suddenly dropped upon him, and thus the fish is caught. In two hours the fishermen will get a boat load. The hallibut are caught with hooks; they sometimes weigh five hundred lbs., and if drawn up carelessly, will overturn the boat.

Finmark is the most northern part of Lapland; many hundred Russian vessels go there every year, and give corn in exchange for fish. The above account is by *Mr. Brookes*, published by *S. Bell*, an American, from his *Travels in the North of Europe*.

The Lath in Loch Fishing.—This is composed of a thin piece of board, about thirty inches long and ten broad, shaped in the form of a boat, and loaded below with a narrow strip of sheet lead. This, when placed lengthwise in water, presents an upright position, sinking to within a short distance of its top. Near the extremities of this board are several holes, to which is attached a cross band, or string, of cord, as to a paper kite. In fact, the whole affair acts on the same principle. To this cross band the line is fastened; it is generally made of oiled silk, and very strong; along it, at regular intervals, are hung a score or two of fly-hooks, of all sizes, also baited with minnow tackles, the whole occupying about thirty yards. More line, however, is necessary, wound upon a pirn, and held off the ground by a remarkably stout rod. Two individuals are required to bring this engine into action, one of whom holds the rod, and the other, at the distance of the line occupied by the tackle, sets the board adrift. The former person, who stands also at the margin to windward, then moves forward. The lath sails

out, with the whole train of flies, until almost at right angles with the fisher; still he proceeds, keeping pace by this singular apparatus, which it requires some degree of skill to manage. When one fish is hooked, there is no necessity of drawing it ashore immediately.

Stoddart's Scottish Angler.

Leistering Salmon.—One who has not witnessed it, will be surprised at the effect of a torch held over a stream during a dark night. Without being magical, it is astonishing; every pebble is revealed, every fish rendered visible in places even where the water is some fathoms deep. None of these, however, occur in Yarrow; in its most unfordable parts you will seldom meet with any very profound or dangerous abysses. The leistering is spearing salmon by torch light; the fish are attracted by the light.

Stoddart's Scottish Angler.

Native Fishing in the Massaroony.—The pacou with the hai-arry: the Indians select a part of the falls where the weya (an aquatic vegetable eaten by the pacou and other fish) is plentiful, they enclose this place with a wall of loose stones, one foot above the surface of the water, leaving spaces for the fish to enter; for these spaces they prepare parrys, or wooden hurdles, and about two hours

before day-break they proceed silently to stop these openings with the hurdles; the fish are thus inclosed, and they commence beating it, and shooting by bows and arrows. By this means Mr. Hilhouse saw two hundred and seventy-two pacou taken, each averaging seven lbs., with one hundred weight of other fish. *Mirror*, vol. xxv.

Malays Fishing Tackle—Is made of cotton, which is fine, hard, and strong, and is stiffened by a gum, to keep out the water; their hooks are made of brass wire, and are barbed; they bait with shrimps; their nets are made from the skin of the leaf of a tree.

Oyster Fishing.—At *Port Mahon*, in Minorca, they fish for oysters in the following manner:—Two persons are engaged; one strips, and fastening a hammer to his right hand, throws himself into the sea, and dives sometimes ten or twelve fathoms to find the oysters; by the help of his hammer he loosens from the rocks as many as he can bring up on his left arm; then striking with his foot, ascends to the surface of the water. His companion takes his place, and performs the same manœuvre. In other parts where it is not so deep, they take the oysters with long pincers, which are put in motion by a cord fastened to one side of the pincer. *St. Sauveur's Travels.*

Domesticated Fishing Otters.—We passed a row of no less than nine or ten fine otters, tethered with straw collars and long strings to bamboo stakes, on the banks of the Matta Colly. I was told that most of the fishermen kept one or two of these animals, who were almost as tame as dogs, and of great use in fishing, sometimes driving the large shoals into their nets, or bringing out the larger fish with their teeth; it has always been a fancy of mine that those creatures whom we waste and persecute to death, might be made sources of amusement and advantage to us.

Bishop Heber.

Catching Fish by Diving, peculiar to the Gulf of Patrasso.—The diver, with a rope made of a species of long grass, moves his canoe to where he perceives a rocky bottom. This done, he throws his rope out to form a large circle, and such is the timid nature of the fish, that it never passes its barrier, but instantly descends and conceals itself. The diver plunges downwards, and seldom returns with less than four or five fish, weighing from two to six pounds each; the fish greatly resembles the John Dory.

Blacquiere's Second Visit to Greece, vol. ii.

Method of Fishing in Polyneci, or Polynesia.—Fishing here is a general pursuit, many of the

natives of Polynesia being fishermen by profession. They are well acquainted with all the most known modes of fishing; the net, the spear, the hook, the line, &c. &c. In no part of the world are they excelled as fishermen, and the variety and excellency of their apparatus is astonishing. Their native hooks are made of wood, shell, or bone; the latter being extremely curious, and answering the purpose of hook and bait. The method of using them somewhat resembles fly-fishing, and shows the ingenuity of these isolated people; the shank of the hook used in catching dolphins, albecornes, and bonitos, is made with a piece of mother-of-pearl shell, five or six inches in length, three quarters wide, carefully cut and high polished, so as to resemble the body of a fish; on the concave side a barb is fastened with a firm bandage, the barb is an inch and a half in length, and is of shell or bone; to the lower part of this is the end of a line securely fastened, and being banded along the inner or concave part of the shell, is again attached to the upper. These pearl shell hooks are considered finer than any in Europe: the line is fastened to the hook or bait, and attached to a bamboo cane twelve or fifteen feet long. Two or three persons then go out in a light canoe, and when they perceive a shoal of the above fish, the person angling throws the hook, keeping the rod at such an elevation as to allow the hook to touch the edge of the water; when

the fish approach, the rowers ply their paddles, and make the canoe fly rapidly along, the fisherman always keeping the hook skimming on the top of the water, so as to resemble a flying fish, the similarity to which being always increased by a number of strong bristles attached to the end of the shell, in imitation of the tail of the flying fish; the dolphin and bonito dart at it, and are soon hooked. Two men will sometimes catch twenty or thirty of these large fish in one forenoon; English hooks have been introduced, but still they prefer their pearl hooks.

Chambers's Journal, No. 79.

Method of Catching Fish at Prince's Island.—The negroes have a singular method of catching fish here, which is similar to the pilchard, (only smaller), and the negroes are extremely fond of it. They build a low wall of loose stones around a pool just within low water mark; this is completely covered, of course, when the tide is up; and when the tide recedes, it leaves a number of the fry detained in the trap. The pool, however, being pretty large, and the fish nimble, it is impossible to catch them with any kind of ease. The negroes then take a plant similar to the blue garden lupine, the leaves and stem of which they squeeze, pressing out the juice, and stirring it in the water; this has a most extraordinary effect upon the fish, although used only in a small quantity; the

fish suddenly become torpid, and are easily taken by the hand.—*Leonard's Voyage to the Western Coast of Africa.*

Natives fishing at Porto Praya.—They fished in boats; their manner of catching the finny tribe appeared to be novel; they sprinkled something on the water, like crumbs of bread, that attracted the fish to the surface, in shoals; the fishermen then swept amongst them a stick, to which a number of short lines, with hooks, were attached, and by the aid of this they usually brought up several fish at a time; some women were in the boat, who were engaged in cleansing and salting the fish.

Bennett's Wanderings in New South Wales.

Fishing in the Straits of Salamis.—A night was spent in fishing in these straits; the method was, sprinkling oil, to make the water pellucid,—a method also used by the ancients. See *Pliny*, *Plutarch*, *Franklin*, &c.

Chandler's Travels in Greece.

Fishing with a Spade—Lancashire.—The wonder of this county is, that about *Wiggin* men go a-fishing with spades and mattocks, and find small fishes in deadish water, under the surface.

Anglorum Speculum, p. 424.

Sicily.—There is a destructive method of fishing practised by the Sicilians in the Mediterranean Sea. It is called the Balancella: two latined-rigged vessels, with a fresh breeze, drag an immense net, by means of hawsers; which net draws in every thing in its course.

Chambers' Journal, Nov. 10, 1832.

Bass Rock, near the Frith of Forth.—*Solan Geese* are the chief inhabitants of this rock. A curious method is used by the fishermen of this neighbourhood to catch them; they take a small wooden plank, which is sunk a little below the surface of the sea, by means of a stone, or piece of lead; on this plank they fasten a herring, and then drag the plank after them by a long rope attached to the boat. The bird, attracted by the sight of its favourite food, wheels two or three times in the air, and then plunges down with such rapidity, that it often transfixes the plank with its bill, and is almost invariably stunned or killed with the shock.

Penny Mag. No. 82, *July*, 1833.

Sole-Pritching.—I was once present at sole-pritching on the coast of Sussex. It can only be followed when the sea is calm. My companion had a very long harpoon, and discovered by practice what I could not—the soles at the bottom; indeed their backs were the colour of the sand:

he was so dexterous in the management of his implement, that he rarely missed his aim.

Medwin's Angler in Wales.

Angling in Surinam.---The negroes of Surinam take their fish by implements which may be denominated the *spring hook* and the *spring basket;* the first of which consists of a strong elastic rod or pole stuck in the ground under water, and to the other end of which are attached two lines of unequal lengths, the shorter having fastened to it a small stick ten inches long, and the other the same, but fixed lower; while at the extremity of this line is hooked a small fish by the fins, in such a manner, however, as to be able to swim to and fro, and serve as a bait for the larger species. Two long sticks being next placed in the ground, so as to appear above water, a third stick is laid across, forming them into the appearance of a gallows; above this gallows is bent and fixed the elastic rod or pole, by means of the double line and the sticks fixed thereon, as mentioned above, but in such a manner that, at the least pull at the bait, the apparatus gives way, the elastic rod instantly assumes an upright position, and the fish that occasioned the spring, by taking the bait, is immediately suspended above water. The spring basket is upon a similar construction. The basket is made of warimbo-reeds, in the form of a sugar-loaf, in the small end of which the elastic

rod is fastened, while at the other end is an open trap-door, the whole being supported in a proper position by a forked stick. No sooner has a large fish entered the basket, and taken the bait, than the elastic rod, as in the former instance, erects itself with a spring, the trap-door closes, and the game is thus secured. In this mode of angling there is, of course, no occasion to watch the line as in the common method, when it frequently happens that the philosophic fisher displays no ordinary degree of patience in calmly waiting for hours, or perhaps for days, in expectation of a very fine nibble at least, if not of a fierce bite. The spring-hook, or spring-basket, if set at night, may be conveniently examined the next morning, and will seldom be found empty, unless fish be very scarce. *Annals of Sporting.*

Fishing in Tonquin. — One of the modes of nocturnal fishing at Tonquin is to frighten the fish by fires carried along the surface of the water, and to attract them into boats by a painted board, sloping downwards, on which they fall in terror, into the vessel. Sprats are caught in quantities, by sinking a bed of large and tough leaves, and pulling it up after a multitude of these small fish have settled upon it.

Fishing on the Towyn Lake.—In the album at the Pennibont Inn, there appeared an account

of the sport of three brother anglers, who killed with the fly five hundred trout in one week.

Medwin's Angler in Wales.

Fishing at Tunis.—The fishing on the large lake at Tunis is as follows: A floating platform is towed astern of a boat, which rows about in different directions; the fish follow, and in their gambols, jump upon it, and are caught by a boy, placed there with a bucket ready to receive them.

Temple's Excursions in the Mediterranean.

Tunny Fishing.—The catching of tunny fish forms one of the principal articles of trade in Sicily, and other parts of the Mediterranean, and is one of the Sicilian amusements during the summer months; the curing and sending the fish to foreign markets, forms also one of the greatest branches of their commerce. These fish do not appear in the Sicilian seas until the latter end of May, at which time the *Tonnaros* (as they call them) are prepared for their reception. This is a kind of aquatic castle, formed at a great expense, with strong nets fastened to the bottom of the sea by anchors and heavy leaden weights.

These Tonnaros are erected in the passages and islands frequented by the tunny fish; with their nets, they take care to exclude every entry into these passages, but one, which is called the outward gate; this leads into the hall, they are then

driven to the second apartment, which they call the saloon, the dining-room, &c. &c. the last is termed the chamber of death; each has a net door; the fishermen attack and kill them in their last chamber with harpoons and spears, which renders them desperate, and they dash about with great force and agility.—*Brydone's Tour through Sicily and Malta.*

Tunny.—Tunnys in Sardinia weigh from one hundred to a thousand pounds. *Cetti* asserts that some weigh eighteen hundred pounds; the largest are always males.

Fishing in the Volga.—The Volga is one of the finest rivers in the world, where they use the most ingenious expedients for catching fish; many of them are known to other countries, but a great many are not known. They fish in winter by hooks let down under the ice, baited with pieces of fish; their nets are of basket work, to take large fish; they also use hurdles, made with rushes. The part of the river is divided into parks, chambers, &c. &c. It appears a most clever contrivance.

Pallas' Voyage, 4to. vol. i. p. 205.

Fishing for the Huso in the Volga.—Professor Pallas gives a very interesting history of it. These enormous fish are taken in the Volga and

the Sciek, which discharge their waters in the Caspian sea; and it seems wonderful that so wild a people as the Tartars should show so much genius. The huso enters the rivers to spawn earlier than the sturgeon, generally about midwinter, when the rivers are covered with ice. At this time the natives construct dikes across the rivers in certain parts with piles, leaving no interval that the huso can pass through; in the centre of the dike is an angle opening to the current, which consequently is an entering angle to the fish ascending the stream; at the summit of this angle is an opening, which leads into a kind of chamber formed with cord or osier hurdles, according to the season of the year. Above the opening is a kind of scaffold, and a little cabin, where the fishermen can retire, and warm themselves, or repose, when not wanted abroad.

No sooner has the huso entered the chamber, which is known by the motion of the water, than the fishermen on the scaffold let fall a door, which prevents its return to the sea; they then, by means of ropes and pullies, lift the moveable bottom of the chamber, and easily secure the fish. —*Rev. W. Kirby's History, Habits, and Instincts of Animals*, vol. i. p. 108.

NATURALIZATION OF FISH.

NATURALIZATION OF FISH.

If fish breathe indifferently in salt water or fresh, (such water as cattle will drink) for one week, or one month, and if in their new element they thrive, fatten, and breed, the trial of three weeks, or three months, is a proof that they will neither sicken nor die of fresh water; the experiment seems to be clearly proved by *Dr. M'Culloch*, in a space from four to six acres.

The Brill has grown to double its size in one year.

Sole twice as thick.

Plaice three times as thick.

The Turbot from eight inches to double its size, besides breeding.

The Basse has propagated.

The Red Mullet is living in good health.

The Whiting also increases in breadth and fatness.

Grey Loach has bred considerably; besides various other fish, all improved in flavour.

Bacon originally speculated on the project of sea fish in fresh water. He remarks, "that fish

used to the salt water, do nevertheless delight much more in the fresh; quoting the salmon and the smelt, I doubt, he says, there hath not been sufficient experiment made of putting sea fish into fresh water ponds and pools; it is a thing of great use, for so you have them new at a great distance; besides, fish will eat the pleasanter, and may fall to breed:" such was the prophetic eye of him who did not reject experiment. Why is it rejected now? says Dr. M'Culloch.

Mr. Arnold, of Guernsey, has in his lake, of about four acres, chiefly supplied with fresh water, many sea fish; all have improved in quality, and propagated. The lake, which before was worthless, only producing a few eels, now yields a large rent. The bottom of the lake is various—muddy, rocky, and gravelly, and since the introduction of sea fish the eels have multiplied a thousand fold; a cart load may be had of them.

List of fish introduced, (those marked † were forcibly naturalized):

Conger	† Rock fish
Forsk	† Cuckoo fish
Sprat	† Old Wife
Shad	† Sole
Lampreys	† Turbot
Stickleback	Rockling

Cottus Quadricornus	Whiting
Mullet	Mackerel
† Plaice	Herring
Flounder	† Pollack
White Whale	Prawns
Cod	Shrimps
Basse	Crabbs
Loaches	† Oysters
† Smelt	† Muscles.
† Atherine	

Dr. M'Culloch's Journal of Science, vol. xix.

Fish Preservers—The far-famed Fish-pond of Logan.—This pond is unlike any thing I ever met with; it was formed in 1800, at an expense of several hundred pounds, and has furnished a wholesale article of food, fatter than can be found in the open ocean. The pond, according to *Mr. Matheson*, is thirty feet deep, and one hundred and sixty in circumference. There is at the top a wall of solid masonry, several feet high, encircling the rock on every side; it communicates with the tide with one of those fissures so common on bold and precipitous shores. It is the property of Colonel M'Dowal, of Logan. Attached to the pond, and forming its gateway, is a neat Gothic cottage for the fisherman; and the rock is surmounted by a stone-wall, grey with lichen, and beautifully festooned with honeysuckle, bin-wood, a nd other creeping plants. In every state of wind

and tide Colonel M'Dowal can command a limited supply of the finest fish, and studies at his leisure their instincts and habits. The fish are daily fed. From the back-door, a stair, neatly cut, conducts the visitor to the usual halting place; a large flat stone projects into the water, and commands a view of every part of the aquatic prison. Fishes hear as well as they see, and the moment the fisherman crosses his threshold and descends the steps, the pond is agitated by hundreds of fins, and otherwise thrown into the greatest commotion; darting from this, that, and other corners, they move as it were to the common centre, on the first view, to be menacing an attack on the poor fisherman, instead of the creel-full of limpets which he carries; the fish were actually so tame that they fed out of their benefactor's hand. The fisherman discoursed on their different tempers as a thing quite as palpable as their different sizes. One gigantic cod, the patriarch of the pond, which the fisherman asserted, answered to his name Tom, most beseechingly, when he turned up his snout, and most forcibly attracted my attention; when, from old age or disease, he became blind; from this cause he lost all chance of scramble with the other fish for food; the fisherman was very kind to him, patted his head, and fed him. The fish in this pond were chiefly cod, haddocks, flounders, blochin, glassin, salmon, and various other kinds.

Sir Francis Barnard (the Governor of New England) had a pool which had no communication whatever with the sea; several salt-water fish had lived therein for many years, and were most healthy. *Phil. Trans.* 1771.

It is not impossible that fresh-water fish might be improved by stews of salt-water in a few weeks. *D. Barrington—Phil. Trans.* 1771.

Sea-water Basins.—Mr. Arbuthnot, at *Peterhead,* has excavated many large basins out of the granite rock. These basins can be filled and emptied at pleasure, by high tide and low ebb. They are intended as a receptacle of sea fish for the London markets; the fishermen bring them in great abundance, and feed them. As the waters are clear, the movements of the fish can be easily noticed, and afford great amusement from the tameness of the fish following the proprietor.

In Berkshire there are some artificial lakes. *Loveden* has one of thirty acres, and a fish-house or cottage, in which are three stews, with covers under lock and key. Many gentlemen have also ponds let to tenants, that produce every third or fourth year carp or tench: by retail, the price is generally from 10*d.* to 1*s.* per pound.

Loudon's Encyclopædia of Agriculture.

River Cod.—In the Murimbidgee River abundance of river cod were taken.

Bennet's Wanderings in New South Wales.

In the *Isle of Osero*, on the coast of *Dalmatia*, there is a fresh-water lake inhabited by sea fish. There is a salt lake at the Cape de Verde which is inhabited promiscuously by marine and fresh-water fishes.

A letter has been read from Mr. Meywell, of Yarm, in Yorkshire, to the Wernerian Society, on changing the habits of fishes. For four years past, he kept the smelt or sperling, salmo eperlaus, in a fresh-water pond, having no communication with the sea; they thrive and breed freely.

Edin. Phil. Journal, vol. xiv.

There appears to be ponds connected with salt water in the Sandwich Islands, belonging to the Royal Family, in which there are a store of small fish always to be obtained, mentioned by *J. Trembly, Esq.* who accompanied Lord Byron to the Pacific Ocean.—*Zoological Journal*, No. xiv.

Artificial Salt Water Estuaries.—A very singular and successful experiment has lately been made in order to introduce sea fish into these estuaries. These, it seems, are hollowed out to a considerable depth, and kept subject in a degree to the influence and changes of the tide; although

at its lowest ebb they still retain a large body of water. In fact, their only connection with the sea is by a gulf, or strait, which, with the tides themselves, is formed alternately into an influx and reflux current. Upon this gulf is placed a wire grating, to prevent the escape of such fish as the estuaries are stored with; the cod, the haddock, ling, whiting, flounder, and even salmon, along with many other salt water tribes, are thus kept within reach at all seasons and in all weathers.

A very remarkable pond of this kind has existed for some years back at Portnessock, in Wigtonshire; not only have fish been provided for, but actually domesticated in it, so as to recognise their keeper, and even take their food out of his hand.

Also at Valleyfield, on the Firth or Forth, near Culross, there is a salt water preserve, belonging to *Sir Robert Preston*, in which are fed stores of fish of various kinds; turbot, brill, salmon trout, cod, skate, flounder, smelt, sole, and herring, are the most distinguished. The fish are fed with offals, and broken shell fish.

Stoddart's Scottish Angler.

Cultivation of Fish.— Mr. Bakewell, in his *Travels* in the *Tarentaise*, suggests the idea of introducing exotic fish; he mentions some Swiss species that he thinks would be valuable.

Importation of Fresh Water Fish.—In the lake of Annecy there is a fish which has accidentally come into the lake by an overflow. It is called Lotte, and was brought by a Savoyard gentleman from Geneva to put into his reservoir near Annecy; the fish escaped, during an inundation, into the lake, and are become very numerous; they increased so fast, as to stock the lake with this excellent fish, which somewhat resembles the eel in flavour, but is more delicate. *Cuvier* classes it with the genus *Gadus*, but it is only a fresh water fish of that genus; it is two feet long, yellow, marbled with brown, its head is a little depressed, its almost cylindrical body gives it a singular appearance; it has a very large liver.

This accident of the overflow may afford a useful hint for the importation of some of the most esteemed fresh water fish into our lakes and rivers, where they no doubt would thrive and multiply.—*Bakewell's Travels in the Tarentaise, &c.* vol. i. p. 43.

GENERAL ANECDOTES CONNECTED WITH FISH AND FISHING.

GENERAL ANECDOTES CONNECTED WITH FISH AND FISHING.

Angling.—The Fly-Fisher.—After a long and dreary winter, what ecstasy the first dawn of spring gives to every being! The winged inhabitants of the woods proclaim their pleasure in various strains, harmonious and harsh; the mellow piping thrush and croaking raven sound their happiness according to nature's gifts. Amongst the different inhabitants of the earth, few greet the approach of spring with greater fervour than the fly-fisher. With what anxiety he watches every change that seems favourable to his sport! his inquisitive eye examines every insect that bursts from its chrysalis to gambol in the fleeting sunshine of a February morning. He anxiously looks on floods, and marks their retreat, day after day, with secret joy. Then to his dubbing bag he hies, and culls from this varied store what his judgment dictates to form the luring fly. Hairs and furs of different sorts, from the shaggy bear and sportive squirrel; from the mortared-wall, or the radiated corner of

a blanket; from the faithful spaniel and the generous cow; from the fleet blue greyhound and timid hare; and all the varieties that can be gathered from quadrupeds wild and domestic: feathers from the watchful mallard and chattering fieldfare; from the wary landrail and mimic starling; the splendid peacock's tail, and fierce cock's hackle, red, black, and dun: with various coloured silks rummaged from a lady's work-box; gold and silver from muslin selvages or soldier's epaulettes; these are the staple materials of the fly-fisher's dubbing-bag. Hooks well barbed; gut fine, round, and strong; and, snug in leather, some of Crispin's tenacious wax; fine well-pointed scissors and nipping forceps—these in his quiet retreat he lays before him; then attentively applies his endless store; observes the changes of the barometer and vane; and lifts the half-made fly between his eye and the light to note its hue. This he repeats, until his book is well filled. He uncoils his lines, examines his rod, and with pannier slung on his shoulder sallies forth to his beloved stream; then, his pliant and well-tapered wand with graceful throw lets fall the fly on a favourite ford, that has yielded many a speckled trout and sportive grayling. Anxiously he watches every curl the limpid stream doth shew, until the bold fish an effort makes to seize the deceitful bait; then, with pointed rod erect, and gentle stroke, the wrist's firm duty makes the latent barb to secure the prey.

Still, with steady eye and hand, he humours every struggle until the exhausted captive yields. W. S.
Sporting Magazine, *N. S.* vol. xxiii. p. 192.

During the month of February all fresh-water fish move from their winter quarters; and, in rivers, jack, pike, carp, perch, chub, roach, dace, gudgeons, pope, and minnows, will take a bait freely. Angle for carp and chub in still deep holes; for roach, on the shallows and scourers, and in gentle shallow eddies; for dace, cast your baited hook in the sharp currents, and also in the strong eddies at the tail of water mills. Flounders, eels, and bleak, begin to feed this month. Jack and pike generally cast their spawn in March; but after a very mild winter, they are (in the middle of February) very full and unfit for the table, the fair angler will, of course, discontinue trolling for them; indeed, such forbearance this season is absolutely necessary, or little sport can be expected during the next; for though the winter has been unusually open, and but few floods have disturbed the rivers and brooks, yet the water has been high and very foul for a considerable time, which has enabled the poachers to practise the destructive art of flueing and sedging more frequently and extensively this winter, than we remember for many years past. Jack and pike are their principal objects, in pursuit of which, we are sorry to say, they have been but too success-

ful. The angler may now begin to his trout tackle, and get all right and in order, but yet by no means to use it, or wet a line, this month; but he may lay night lines for eels in March, choosing dark mild evenings when he lays them, and, unless the night turns out very cold or frosty, the eels will hasten and feed.

There is in the 238th number of *Blackwood's Edinburgh Magazine* for August, 1835, under the head of *Anglimania* (the passion for angling), an excellent and highly humorous description of the way in which *Christopher North* killed his first salmon. The gratification derived from the diversion of angling is shown to be not only perfectly innocent, but greatly conducive to improve the heart, and to render the mind more attentive to the beauties of nature in general, and to the charms of rural scenery in particular. Rumour ascribes this ingenious article to *Prof. Wilson*, whom the Editor begs leave to thank, in his own name, and in the name of all ardent lovers of angling.

Audacity of a Fish.---It happened one day, as we were wading in calm water, among the coral reefs of the Island of Guam, in search of molluscous animals, we were assailed by a small chetodon, butting against us with the end of his snout, as to defend the approach to the rock under which it lodged, with many others of the same kind.

We stretched out our hands towards it, against which it butted in the same manner; we drove it away, but it returned again.

Quoy et Gaimard Zoologie du Voyage, p. 383.

Creeping Fish.---The *Blennies* have fins of two thick rays, separated like the claws of a bird, for the purpose of enabling them to creep with facility between the spotted stones and fuci, which are of the same hue as themselves, and prey upon floating insects. *Miss Roberts.*

*** The hussar, another creeping fish, is noticed elsewhere in this book.

Bosc often amused himself with a creeping fish found by thousands in the fresh waters of *Carolina*, called swampine, which has the faculty of living out of water, and by a peculiar instinct, if put down, would immediately proceed to water, though it could not see it. It travels by leaps. During their migrations these fish furnish food for birds and reptiles.

Another fish found by *Daldorff*, in *Tranquebar*, not only creeps upon the shore, but climbs the fan-palm, in pursuit of certain crustaceans, which form its food. The structure of this fish particularly suits it for the exercise of this remarkable instinct: its body is lubricated with slime, which facilitates its progress; and its gillcovers are armed with spines, which are used as hands, &c. &c.

Rev. W. Kirby.

Boots and Shoes made to resist Water.—Smear them over with wax and caoutchouk, even quantities melted together; a single dressing answers.

Charming Fish.—The Indians at Hudson's Bay, when they bait their hooks in angling, first sew a composition of four, five, or six articles, round it, by way of charm. The materials were really not worth notice. Animal substances serve as baits as well as charms. Every master of a family has a bundle of such trash, which they always carry about with them, summer and winter; and without these articles few could be induced to put a hook into the water, being fully persuaded they may as well sit in their tent as angle without assistance. This superstitious method of alluring is not confined to the hook only, but to a new net.

Daniel.

Cats catching Fish.—Many a time have I witnessed puss (and a very pretty tortoise-shell puss she was, and a great favourite with all) watching at the brink of the pond for its finny inmates, and darting on her prey in spite of the wetting she encountered, and regaling on the delicious fare. This sport she continued until her death. So amused were we with her angling powers, that we threw no obstacle in her way.

Mag. Nat. Hist. vol. iv.

Curragh, or Irish Fishing Boat.—I saw a woman sitting in a curragh, fishing for codlings and gunners, watching the hooker as she shot the spillets; this vessel was composed of a few slight hoops secured together with cords, and overlaid by a covering of canvass, rendered waterproof by a coating of tar and tallow; the machine was so unsubstantial that it might be carried by a school-boy; it scarcely rested on the surface of the sea, and yet the young islander sate in perfect security in this frail vessel, a couple of handlines coiled at her feet, and the bottom of the curragh was over-spread with the produce of her fishery.

Wild Sports of the West.

Chub and Trout.—A friend of mine angling with a fly some time since, in Worcestershire, hooked a chub which weighed two pounds and a half; at the same moment a trout, about half a pound, took the drop fly, and was soon exhausted, while the chub, from its size and strength, kept the line so tight as to suspend the trout in the air for near a quarter of an hour; but the lucky angler brought them both safe to land.

Sporting Mag. N. S. vol. ii.

Duck and Trout.—As a gentleman was angling in the Mill Dam below Winchester, he accidentally threw his line across a strong white duck, which suddenly turning round, twisted the gut

about her own neck, and fixed the hook of the dropper fly in her own breast. Thus entangled and hooked, she soon broke off the gut above the dropper, and sailed down the stream, with the end of the fly trailing behind her; she had not proceeded far before a trout, of about a pound and a half, took the fly effectually. Then commenced a struggle as extraordinary as ever was witnessed; a duck at the dropper, and a large trout at the end of the fly! Whenever the trout exerted itself; the terrors of the duck were very conspicuous; it fluttered its wings, and dragged the fish. When the trout was more quiet, the duck evidently gave way, and suffered herself to be drawn under some bushes, where the shortness of the gut did not allow the trout to shelter himself; the duck's head was frequently drawn under water. By chance, however, the gut got across a branch, which hung downwards into the water, and the duck taking advantage of the purchase which this gave her, dragged her opponent from his hole, and obliged him to show his head above water. Then it became a contest of life and death, the trout was in its last agonies, and the duck evidently in a very weak state, when the gut broke, and suffered them to depart their own way.

Sporting Mag. vol. xlviii.

The *Chinese* have a fish which is much esteemed by them, named Tcho-kia-yu, or in French

l'Encuirassé, it is so named from its sharp scales ranged in straight lines, similar to the tiles on the roof of a house. The flesh of this fish is very white, and its taste similar to veal; it weighs commonly about forty pounds.

In mild weather the Chinese fish for another sort of fish, which, from its whiteness, they call flour-fish; it is most remarkable for its black eyes, which seem surrounded by two circles of brilliant gold; it is taken in great numbers, as many as four hundred pounds at a time.

The province of Tchekeang abound in a fresh fish similar to ling, which is consumed in great numbers, and salted the same as herrings; it is thus preserved and transported into the farthest provinces of the empire.

Docility of Fish.—Mr. Stowe, of Lexden, Essex, had fish ponds in which he kept carp and tench, and which he fed regularly with bread and milk, the fish coming to the sides of the pond to his call, and feeding out of his hands; he also took them up in his hand.

Sporting Magazine, vol. vii. *N. S.*

Double Fish.—A pair of cat-fish, a species of Siluris, were taken alive in a shrimp net at the mouth of Cape Fear river, near Fort Johnson, N. C. in August, 1833, and presented to Professor Silliman. One of them is three and a half, and

the other two and a half inches long, including the tail; the smallest emaciated and of sickly appearance. They are connected, in the manner of the Siamese twins, by the skin at the breast, which is marked by a dark streak at the line of union. The texture and colour, otherwise, of the skin is the same as the belly; the mouth, viscera, &c. were entire and perfect in each fish, but, on withdrawing the entrails through an incision made on one side of the abdomen, the connecting integument was found to be hollow. When the largest fish was in his natural position, the small one could, by the length and pliancy of the skin, swim nearly in the same position; their sex was not ascertained. — *American Journal of Arts, April*, 1834, in which a plate may be seen of this fish.

One-eyed Fish.—Many of the lakes in Caernarvonshire abound with fish, of which some are peculiar to Alpine waters, and others noted for extraordinary conformation. *Lyn y cwn*, or the dog's pool, which is considered the highest among these mountains, contains three sorts of fish, eels, trout, and perch, all of which have only one eye, the left being wanting. *Geraldus* also mentions, that in two places in Scotland, one near the eastern, and the other near the western sea, mullets are found to have the same defect.

Daniel's Rural Sports, Supplement.

Anableps, or Four-eyed Fish.—The most singular eye of fish is that of the anableps, a viviparous fish, inhabiting the rivers of Surinam, and called by the natives the four-eyed fish. If the cornea of this eye be examined attentively, it will be found that it is divided in two equal portions, each forming part of an individual sphere, placed one above, and the other below, and united by a little narrow membranous, but not diaphonous, band, which is nearly horizontal when the fish is in its natural position; if the lower portion be examined, a rather large iris and pupil will be seen, with a crystalline humour under it, and a similar one with a still larger pupil in the upper portion, if we may conjecture, this enables the animal to see near and distant objects at the same time, the little worms below for its food, and to guard against the great fishes above.

Rev. W. Kirby.

In some of the rivers in Guiana, there is found a curious fish, about the size of a smelt, which has four eyes, two on each side, placed one above the other; when swimming it keeps two eyes above, and two below the surface. *Mirror*, vol. xxv.

Fish in a Glass Bowl.—Mr. W. Aderon recommends persons who are amused with the evolutions of fish in a bowl, to try small fish of prey, as affording most amusement; it also becomes

soonest tamed, will even eat out of the hand, in consequence of this kind of fish being obliged to be often fed with live baits, such as worms, &c. &c.
Phil. Trans. vol. xliv.

Fish killed by Heat.—The excessive heat of July, 1750, caused the fish in the Thames to gather in shoals to the bank side, and to bury themselves in the ooze and mud; they were easily taken in great quantities. Loads of fish also perished in the fens of Cambridgeshire; one person lost 300*l.* by the death of jack or pike.

Ichthyophagi, or Fish-Eaters.—This denomination, which frequently occurs in Herodotus, and other ancient authors, was applied to such nations as lived partly on fish, and probably intended as a mark of contempt, or to express their mode of subsistence. *Quin* thought differently of fish diet, as well as many others who have invented very savoury sauces, which bear their names to this time. See in this book, under the head "Eel," from Spallanzani, that consumptive persons have been cured by fish diet. *Editor.*

Diodorus mentions a race of men that lived near the strait which joins the Indian Ocean to the Red Sea, who were fish eaters; they were naked, and lived entirely on catching and eating fish; they also went up the country in large companies, to drink fresh water.

Extraordinary Fish Dinner, given by the Emperor at Moscow to Macarius.

At the entertainment which ensued, there were fish of every kind, boiled and roasted, and many kinds of it fried in paste, with stuffing, so varied, that we ourselves never saw any thing equal to it. There were also several kinds of fish, pounded after the bones had been removed, and moulded into the shapes of ducks and fowls, roasted and fried. *Macarius's Travels.*

Fishing Extraordinary.—On Monday evening last, the *Duke of Buccleuch*, after a day's hunt, killed, within an hour, in the pool close by Monteviot, three salmon, two perches, and a pike of fourteen pounds, with a single gut line. Besides those secured, his Grace ran several other salmon, and another large pike; and one of the most remarkable points of the fishing adventure, was the recovery of a hook and line, in the mouth of a kelt of eight pounds weight, which again took the hook after having broken away from the first take. As a suitable termination of such sport, his Grace, at night, speared twelve fish in the same pool. *Sunday Times, April* 26, 1835.

The Flounder.—The flounder is only found in rivers where the tide flows, and when you are angling for eels in these parts, you are as likely to catch flounders. They are caught in the creeks connected with the Thames below bridge. In the

Trent they are taken in considerable quantities, and of good weight, some a pound each. The hooks are baited with a lob-worm; and one flounder taken with a minnow weighed twenty-three ounces.
Pickering's Edition of Walton.

Mr. Pennant says, there are few lakes in England that produce this fish. It is found in Winander Mere, and Llyn Quellyn, near Snowdon.

Fisherman or Angler.—In all ages the respect due to the fisherman has swelled the songs of the poets, and his quiet and happiness held up as blessings to the multitude. Reclused from the bustle of society, he is seldom subject to its inconveniences; and as his wants are but few, the gratification of them is generally obtained without the pangs that wait on luxury and dissipation; health is his handmaid by day, and at eve spreads his bed with roses. *Sporting Mag.* vol. xlvii.

Gold and Silver Fish.—The best water to breed them in is still spring ponds, the more weeds the better; no occasion to separate them, as they frequently change colour, and the greatest proportion bred from them will be invariably brown.
Sporting Mag. N. S. vol. lii.

Boy swallowing a Fish Hook.—A boy having swallowed a fish hook, endeavoured to pull it with the line, but without effect, as it was fast. Surgeons could give him no assistance, until making

a small hole in a leaden bullet, the line being put through it, he swallowed it, which running down the line, by its weight loosened the hook from its hold, which was then drawn up with ease. *Gent. Mag.* 1738, p. 380.

The Scales of Fish are beautiful objects for the microscope; those of the roach are inserted half way into the skin, and are transparent. Fishermen assert that they at one time sold the scales of roach and dace at 18*s.* the pint, and bleak as high as 20*s.* the pint; the scales of the eel are very small. *Mirror*, vol. xxv.

Scales denoting the Age of Fish.—Lewenhoeck observes, that from carefully examining the scales of fish through a high magnifier, you may easily ascertain its age, from the first scale to the last, which are never shed.

Gut.— What *Mr. Stoddart*, in his *Scottish Angler*, says, on the subject of gut, deserves attention. This article, now brought from Spain and Italy, is fabricated from the male silk-worm, in a state of decomposition, from the gluey substance which composes its entrails; worm gut varies in length, from nearly two feet, and downwards. Animal gut is found to be the best for angling, (though there are similar materials formed from the heron's leg, bird's, &c. &c.) It ought to be small, round, and transparent, without any

flaw or roughness. When worn or disordered, a little India rubber will renovate it; when you make knots, do not cut the end too close. Gut, to keep well, should be moistened with fine oil, and kept in oil paper.

Hot Wells, Reikiavik, Iceland.—Of the trouts it has been observed, that when they come up the rivers and brooks, and approach the hot springs, they are fond of staying in the lukewarm water, where they grow so fat as to be scarcely eatable. Eels die when they approach the heated streams.

Barrow's Iceland.

Horses fed on Fish.—The horses, in Iceland, are fed in winter with fishes' heads and bones, chopped up with a little hay, and boiled altogether in water. *Barrow's Iceland.*

Hampshire.—A very few years since, sea fish were so plentiful in this county, that oysters sold for three halfpence a hundred, prawns sixpence, mackerel fourpence per dozen, and whiting twopence.

Hooks.—The hook used in Scotland by *Mr. Stoddart*, and which he prefers, is Kendal circular bend. It is of much lighter make than the Limerick, and its shape in the smaller sizes more suitable for hooking trout. The Limerick hooks are

denoted by letters with A. The Kendal are by figures, to 20.

Hints to Anglers.—Fish with face towards the sun, and you will be more certain of sport, as you frighten the fish by the shadow of your rods and bodies on the water, and get no sport, by your back to the sun. *Salmonia.*

The Huso.—This fish is only found in the Caspian and Black Seas, and the Don and the Volga, and other rivers that flow into them. It is stated to be much larger than the sturgeon. *Pallas* describes one that weighed two thousand eight hundred pounds, which was conjectured to be near forty feet long. Its ordinary length is stated to be twenty-five feet. The number of this species far exceed those of the sturgeon. The caviar is usually made of its spawn, which is nearly a third in weight to the whole fish, from whence we may conjecture the infinite number of eggs it contains.

At the last meeting of the *Medico Botanical Society, Dr. Hancock* read a paper on a plant called *comiparu* by the natives of Guiana. It is used to intoxicate fish, so as to enable the fisher to catch them by the hand. It flowers at all seasons of the year; the flowers are small and white, always covered with leaves.

New Monthly Mag. June, 1835.

The Migration of fishes is one of the most valuable gifts of the Creator to his creature man, by which thousands and thousands support themselves and their families, and which at certain seasons form the food of millions. If we give the subject of migration due consideration, and reflect what would be the consequence if no animals ever changed their quarters, consulting not only man's sustenance, and the gratification of his palate, by multiplying and varying his food, but also that of his other senses, by the beauty, motions, and music of the animals that are his summer or winter visitors :—did the nightingale forsake our groves; the swallow our houses and gardens; the cod-fish, mackerel, salmon, and herring, our seas; and all the other animals that visit us ;—how vast would be the abstraction and comfort of our lives! By means of these migrations the profits and enjoyments derivable from the animal creation are more equally divided ;—at one season visiting the south, and enlivening the winter at another—adding to the vernal and summer delights of the inhabitants of the north, and making up to him for the privations of the winter. What can more strongly mark the design and the intention of an all-powerful and all-wise beneficent Being, than that such a variety of animals should be so organized and circumstanced as to be directed annually, by some pressing want, to seek distant climates, and after a certain period to return again to their former

quarters; and that this instinct should be of so much good to mankind, and that it should be necessary for the propagation of their species!—*Rev. W. Kirby, on the History, Habits, and Instincts of Animals.*

Miscellaneous Extracts from Mr. Jesse's valuable and entertaining Gleanings in Natural History.—"The perch is the boldest and most familiar of any of the fish. I found no difficulty in getting them to come with eagerness, and take a worm out of my hand. The barbel were the shyest; when not seen, they would show considerable playfulness. The trout appeared to bear their confinement with less philosophy than any of the others. The chub were also very restless, being continually on the move, but they never could resist a cockchafer when thrown to them. Flounders moved at night. Eels always made their escape; they had no other way than crawling up the brickwork. The carp and tench were soon reconciled to their situation. The pike, of which I had eight, about five pounds each, kept up their character for voracity. Out of eight hundred gudgeons counted into the reservoir, there was scarce any to be seen at the end of three weeks. I should mention that three large barbel, and six good-sized perch, probably partook of them. But of all my fish, the bleak were the most amusing and playful. Fish have the power of hearing the

firing of a gun; they have also the sense of smelling, by preferring paste and worms that had been prepared with different perfumes; they have also curiosity and affection."—For further information, the account which Mr. Jesse gives of his *Piscatorium*, is, like his work, uncommonly amusing.

Fishes that swim and take their food near the surface, die soon when taken out of the water, as trout, dace, mackerel, and herrings; on the contrary, those fishes that swim and feed near the bottom are all tenacious of life, and continue to exist for many hours after their removal from the water, such as carp, tench, eels, and all flat fish.

Jesse's Gleanings, second series.

Newfoundland Dog and Pike.—Extraordinary circumstance.— On Monday, April 10th, as Mr. Miles of Southfield, near Malmsbury, was walking by the side of the river, with a favourite Newfoundland dog, the animal jumped in, and caught a fine pike weighing three pounds.

Sporting Mag. N. S. 1820.

Otter caught by Line and Hook.—Mr. John Wane, of Penrith, fishing with bait in the Eamont, at a place called Udford, caught a young otter, and, after much difficulty, succeeded in taking it alive. Whilst he was taking the young one out of the river, two old ones made their appearance and

had nearly succeeded in rescuing it. Mr. Wane is an excellent line-fisher.—*Sport. Mag.* vol. xlvi.

Owl caught by Angling.—We ourselves once caught an owl,—not with the fly, nor the worm, nor the minnow, but with the live mouse. As soon as he felt himself hooked, he sailed away to Josey's barn..in at a hole, and on to a balk; but after a desperate struggle, and with the aid of a terrier, we captured him on the hay mow, had him stuffed, and he is now in the museum of our University.

Blackwood's Edin. Mag. July, 1835, p. 122.

Pike and Carp.—As some gentlemen were fishing in the great pool belonging to Mr. Finch, in his park near Estree, Herts, they drew up a pike, of a very large size, which they opened, finding it much swelled, and discovered in the stomach a carp, the weight of which was eight pounds and a half; the pike without the carp weighed thirty-six pounds. *Sporting Mag.* vol. xlvi.

Pike destroyed by Tadpoles.—Twenty brace of pikes, from nine to three pounds, were taken out of a large piece of water, to supply a large stew; in about a month they were seized on their backs by tadpoles, scaled, and flesh eaten from them; they were seen in this state at the top of the water; they were all taken out, but died.

Sporting Mag. vol. iv. *N. S.*

To make Fish Luminous.— Take a piece of herring, of three drams, put it into eight ounces of oxigen gas. Mackerel also has the same effect in making fish luminous. *Nicholson's Journal.*

Fishes destroyed by Mephitic Vapour.—In the neighbourhood of Vesuvius, several hundred weight of fish having been observed at Resina, in great agitation on the surface of the sea, near some rocks of an ancient lava that had run into the sea, some fishermen surrounded and took them, and found them stunned by the mephitic vapour.
Gallery of Nature and Art, vol. i.

Fine Paintings of Fish.— In Fishmongers' Hall there are eight capital paintings, representing one hundred fishes, such as are offered for sale at the London markets; also the time in which they are in season.

Piscatorial Celebration.— In looking over a *New York* paper, I found the piscatorial celebration mentioned of the *Cincinnati* Angling Club, with their president, vice-president, secretary, and twenty-five members. About twelve or fifteen met the day before, and angled for a day and a half with capital success, having caught within that time three hundred and fifty-three bass and salmon, some very large. They spent a very pleasant day, and amongst their toasts they gave

"The Memory of Isaac Walton and Charles Cotton." The members of the *Pitsburgh* Angling Club, the *Schuylkill* Fishing Company, are still flourishing in full vigour, at the advanced age of ninety-eight years. It appears from these statements that there are angling clubs formed in several parts of North America. *Editor.*

Protection of the Ocean Tribe.—In order to protect a number of the ocean tribes from the prying eyes of their enemies, or perhaps to assist them in seizing their prey, the Creator has assigned them a style of colour exactly according with the sands or seaweeds among which they harbour. *Miss Roberts's Sea-side Companion.*

Rat caught by Line and Hook.—May 27th, 1816: As Mr. Josiah Carter, late vicar of Salisbury Cathedral, was fishing in the Itchen stream, for trout, he caught a large male rat, which measured, from nose to tail, eighteen inches, and weighed five pounds and a half.

Sporting Mag. June, 1816.

Retreat of the Natives of the Ocean.—The bed of the surrounding ocean is most admirably adapted for the retreat and preservation of the natives of the deep. Instead of a level and sandy bottom, liable to be disturbed by the storms of the northern region, it consists of deep valleys and

lofty mountains, provided with abundance of marine plants, where the watery nations rest securely during the most tempestuous seasons, waiting till the return of spring invites them to their summer haunts. *Miss Roberts's Sea-side Companion.*

Similitude between Fish and Birds.—The fish may be said to fly in the water, and the bird to swim in the air; but perhaps the movements of the aquatic animal, from its greater flexibility, are more graceful and elegant than those of the aerial. The feathers of the one are analogous to the scales of the other, the wings to the pectoral fins, and the tail acts to both the part of a rudder.

Rev. W. Kirby.

Smell in Fish.—La Cépidè says that the smell of fish is the most acute of all the senses, and it may be called the real eye of the fish, since by it they can discover their prey or their enemies at an immense distance; they are directed by it in the thickest darkness, and the most agitated waves the organs of this sense are between the eyes.

Sea Gulls caught with a Hook.—Col. Macdonald, of Powderhall, near Glenshee, fishing for trout, in a boat, caught a score of sea gulls with his tackle.

Superstition of Montrose Fishermen. — As a number of Ferryden and water-side boats were engaged in their useful employment of fishing off Montrose, a large salmon leaped into one of the boats, just as the crew were prepared to throw their lines. The superstition of our fishermen is proverbial, but in this instance it was rather singular, for on the appearance of the fish, they devoutly closed their labours, and sailed home, certain that if they dared to take a fish that day, they would never catch another.

Montrose Review, Feb. 1820.

Salmon Roe, how dressed for Bait.—Procure some pounds of the freshest fish; notice that it be red and firm, take off the membrane and broken parts, wash the spawn in lukewarm milk and water, carefully separating the individual particles; beat together three parts of fine salt and of saltpetre, and rub the whole carefully with the mixture, in the proportion of an ounce and a quarter to a pound of roe. Spread it, thus prepared, over a flannel cloth, until quite dry and tough; then stow it in pots, and run the top over with lard, to exclude the air. In making paste, parboil the roe, salting it with the same mixture as described. *Stoddart's Scottish Angler.*

Sparrow Hawk caught by Hook and Line.— On Thursday, April, 1821, as a man of the name

of Roberts was angling in the river Eden, below Ann's hill, he caught a sparrow hawk thus; he had hooked a brandling, and as soon as he threw it out of the water, a hawk that had been hovering about, darted upon the fish, seized it, and flew aloft. The hook, however, became fixed under the wing of the bird, and when the whole of the fisherman's line had been drawn off the wheel (above forty yards), the soaring of the feathered plunderer was checked, after a short excursion round the head of the astonished angler.

Snipe have been taken, whilst angling for trout, with a meggat foot.

St. Ronan's, or Border Club, adds angling to its other amusements, and gives, every season, a medal, in the month of April, for the largest salmon caught by angling.

A gentleman fishing in *Lunan* this month, May, had occasion to cross the stream, and, carrying the rod over his shoulder, a brisk breeze carried out the spare line, with fly-hooks at it, a *swallow* mistook the hook for a real fly, and snapping it, was made fast; it was soon released.

Montrose Review.

Swallows have been caught by the hook with artificial midge flies.

Average Price of Fish at Billingsgate in 1804.

Plaice	$1\frac{1}{2}d.$ to $2d.$
Soles	$5d.$ per lb.
Cod	$6d.$ per lb.
Ling	$5s.$ each.
Haddock	$3s.$ or $4s.$ per basket of 24 fish.
Mullet	$2s.$
Doree	$2s.$
Turbot, small	$3s.$ to $5s.$
Mackerel	$30s.$ to $70s.$ per 100.
Gurnard	$4s.$ to $5s.$ per basket of 24 fish.
Whiting	$2d.$ to $3d.$ each.
Herrings	$4s.$ per 100.
Oysters	$12s.$ per bushel.
Eels	$4d.$ to $6d.$ per lb.
Hallibut	$10s.$ to $20s.$ each.
Salmon	$1s.$ $6d.$ per lb.
Smelts	$2s.$ $6d.$ per 100.
Roach	$2s.$ to $3s.$ per 100.
Pike	$1s.$ per lb.
Perch	$2s.$ $6d.$ per lb.
Carp	$1s.$ per lb.
Tench	$1s.$ $6d.$ per lb.

Edward I. condescended in his reign to fix the following Prices to Fish.

Plaice	$1\frac{1}{4}d.$
Soles	3*d.* per doz.
Cod or Ling	3*d.*
Haddock	2*d.*
Barkey	4*d.*
Mullet	2*d.*
Doree	5*d.*
Conger	1*s.*
Turbot	6*d.*
Mackerel in Lent	1*d.*
——— out of Lent	$\frac{1}{2}d.$
Gurnard	1*d.*
Whitings	1*d.*
Herrings, pickled	20 for 1*d.*
Herrings, fresh	6 for 1*d.*
——— after Michaelmas.	12 for 1*d.*
Lamprey	4*d.*
Oysters	2*d.* per gal.
Best Sea Hog, Porpoises	6*s.* 8*d.*
Eels, per strike, quarter of a hundred	2*d.*
Salmon	5*s.*
Smelts, per 100	1*d.*
Roach	1*d.*
Pike	6*s.* 8*d.*

Seals were eaten in those days. If the increased expenses of provisions, cordage, bait, men's wages, &c. &c. are taken into consideration, the difference in price will not be found so great.

Fish condemned at Billingsgate. — The total number of fish condemned as unfit for food, within the last three years, ending in 1833, viz.—salmon, cod, turbot, herrings, mackerel, lobsters, &c. was 492,538; in addition to this number, there were seized and condemned 3,525 bushels of sprats and shell-fish, and 126 kits of pickled salmon.

Mirror, vol. xxv.

Shower of Fishes.—On Wednesday before Easter, 1666, a pasture field at Cranstead, near Wrotham, Kent, of about two acres, which is very far from the sea, and where there is no fish-pond, was all overspread with little fishes, conceived to be rained down, there having been a great tempest of thunder and lightning; the fishes were about the size of a man's little finger, and judged to be young whitings; many of them were shewn to the public. *Phil. Trans.* 1698.

Query: Is it not probable that these fishes were absorbed from the surface of the water by the electric suction of a water-spout, or brushed off by the violence of a hurricane? *Editor.*

Fish conveyed by a Water-spout.—As *Major Mackenzie, of Fodderty*, was traversing his farm, he was surprised to find a considerable portion of his land covered with herring fry, from three to four inches in length; the fish were fresh and entire. The only rational conjecture is, that the fish were conveyed there by a water-spout. This place was situated about three miles from the sea, all level ground. *Gent. Mag.* 1828.

Mr. Arnot relates that showers of herrings fell near Loch Leven, Kinrosshire, in 1825.
Jamieson's Journal.

Showers of herrings fell in Galloway.
Symon's Galloway.

Showers of herrings fell in Argyleshire, March, 1817, on a range of moorland, about three hundred feet above the level of the sea.

Shower of Shells in Ireland.—In the year 1825, shells fell at Monastereen, in the county of Kildare; at this time the tides were remarkably high, and the sea exhibited unusual disturbance.
Jamieson's Journal.

Fish ejected from Volcanoes.—*Mr. Humboldt* communicated to the French *National Institute*,

amongst other curious facts, the following :— Several of the volcanoes of the Cordilleras of the Andes occasionally threw out large volumes of fresh water, with an immense number of fishes. The volcano of Imbaburo threw out, at one time, such a great number near the town of Ibarra, that their putrefaction occasioned disorders. This phenomenon, astonishing as it appears, is not even extraordinary, but, on the contrary, of frequent occurrence; so that the facts are authentically preserved in the public records. It is most singular that these fish are not all injured, and sometimes arrive at the foot of the mountain still living; these animals are thrown from the mouth of the crater, at the height of twelve or thirteen hundred fathoms, and the same species are found in the brooks that run at the foot of the mountains; it is the only species that subsists at the height of fourteen hundred fathoms above the surrounding plain: it is a new species to naturalists, and *Mr. Humboldt* has given them the name Pimelodrus Cyclopum; they may be found in the first number of his Zoology; he supposes there are lakes in the crater.

Shower of Fishes.—An extract of a letter was read from Mrs. Smith, dated Monradabad, July 20, 1829, to a gentleman in Somersetshire, giving an account of a quantity of fishes that fell in a

shower of rain at that place. Many were observed by Mrs. Smith from her window, springing on the grass immediately after the storm. The letter was accompanied with a drawing taken on the spot, which represents a small species of Cyprinus $2\frac{1}{2}$ inches in length, green above, silvery white below, with a broad lateral line, bright red.

Linn. Soc. vol. xvi. part 3.

Shower of Muscles.—According to the *Pittsburgh* (American) *Gazette*, a fine shower of muscles fell within the walls of the jail there, on the 9th of August, 1834.

The *French National Institute* mentions that they have had repeated information of *showers of toads*, perhaps frogs.

Method of obtaining the Skeleton of Small Fishes.—Suspend the fish by threads attached to the head and tail, in a horizontal position, in a jar of water from a pond, with a few tadpoles in it, the tadpoles acting in the same manner as the ants, always using the smallest tadpoles.

Bluet's Phil. Mag. N. S. vol. vii.

Fish enclosed in Stone on Monte Bolca in the Veronese territory, considerably elevated above

the sea. The fish are of a dark brown colour, and therefore appear very distinctly on the light ground of the stone; they lie flat between the laminæ; their profile, and their several parts, are little, if at all, distorted from their natural shape and dimensions; their whole form is well defined. These quarries belong to the Marquis Gazola, who has already in his cabinet one hundred different species of these fish, with a scientific catalogue of them. For other particulars see the *Transactions of the Royal Irish Academy*, vol. v.

Temperature of Fishes and warm-blooded Animals.—Dr. Davy, in a paper read before the *Royal Society*, stated that he had occasion to observe, many years ago, that the bonito had a temperature of 99 Fahrenheit, when the surrounding medium was 80° 5′, and that it therefore constituted an exception to the generally received rule, that fishes are universally cold-blooded.

Having found that the gills of the common thunny of the Mediterranean Sea were supplied with nerves of unusual magnitude, that the heart of this latter fish was very powerful, and that its muscles were of a dark colour, the Doctor was led to conjecture that, like the bonito, it was warm-blooded. The author endeavours to extend this analogy to others of the same family.—*Edin. New Phil. Journal*, vol. xix. No. 37.

Theophrastus, in his treatise upon fishes, says: there are small ones, which leave their native streams for some time, and then return to the water; they are said to resemble mullet.

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A CATALOGUE OF BOOKS

UPON ANGLING

LONDON

1836

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This Catalogue of Works on Angling will be found more extensive than any hitherto published. It is formed upon Sir Henry Ellis's corrected copy of the List, which he contributed to the British Bibliographer in 1811, and which he kindly lent for the purpose.

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Accomplisht Lady's Delight in preserving, physick, beautifying, and cookery, with new and excellent experiments, and secrets in the Art of Angling, being directions for the whole art (taken entirely from Walton and Barker). 1st edit. 1675. 2nd edit. 1677. 3rd edit. 1684. Vide New and Excellent Experiments.

Albin's (Eleazar) History of Esculent Fish. With North's Essay on Fish and Fish Ponds. 18 coloured plates. 4to. Lond. 1794.

Angler (The), containing a complete description of all fresh water fish, and the best places for Angling near London. Sq. 12mo. Lond. Groombridge, 1834.

Angler's Complete Assistant, being an Epitome of the Whole Art of Angling. 4th edit. 4to. Lond. See Wilkinson.

Angler's Daily Journal.

This is merely a book with ruled lines to take memorandums of fish caught each day.

Angler's Companion, being a Complete Practical Guide; with Nobbes's Art of Trolling. 12mo. Hughes.

Angler's Guide. 24mo. Lond. Dean and Munday, 1832.

Angler's Manual; or, Concise Lessons of Experience, which the proficient in the delightful Recreation of Angling will not despise, and the learners will find the advantage of practising, containing useful instruction on every approved method of Angling, and particularly of the management of the Hand and Rod in each method, with plates by Howitt. Oblong 8vo. Liverpool, 1808.

Angler's Magazine; or, Necessary and delightful Storehouse; wherein every thing proper to his art is digested in such a manner, as to assist his knowledge and practice upon bare inspection; being the completest Manual ever published upon the subject; largely treating on all things relating to Fish and Fishing, and whereby the Angler may acquire his experience without the help of a Master. By a Lover of that innocent and healthful diversion. 12mo. Lond. 1754. (The initials G. S. at the end of the preface.)

Anglers. Eight Dialogues in verse. 12mo. Lond. 1758.

*** A manuscript note in a copy of the work, formerly belonging to Mr. White of Crickhowell, ascribes it to Dr. Scott of Ipswich. It contains ironical notes in imitation of Dr. King's Art of Cookery.

Art of Angling, in Eight Dialogues, in verse. 8vo. (Reprinted entire in Ruddiman's Collection of scarce, curious, and valuable pieces, both in verse and prose. 8vo. Edin. 1773.) Vide Lathy's Angler, *post*.

Angler in Ireland; or, an Englishman's Ramble through Connaught and Munster, during the summer of 1833. 2 vols. royal 12mo. Lond. 1834.

Angler's Pocket Book, to which is prefixed Nobbes' Treatise on the Art of Trolling. 8vo. Norwood.. 2nd edit. 8vo. Lond. —. 3rd edit. 8vo. Lond. 1805. 12mo. Lond. 1804.

Angler's Progress, a Poem. Vide Boaz.

Angler's Sure Guide; or, Angling Improved and Methodically Digested, by R[obert] H[owlett], esq. forty years a practitioner in this art. 8vo. Lond. 1706.

Angling, an article in the Encyclopædia Metropolitana, Vol. xvii. (fourth division of vol. i.) 4to. 1829. p. 580-590, with a very copious table of fish-places, seasons, waters, baits, habits, &c.

Angling in the Lakes of Geneva and its Tributaries. Sporting Mag. 1833. Vol. vii. 205. second series.

Angling Society for the Preservation of Fish, at Henley. Sporting Mag. 1833, second series, Vol. viii. p. 206.

Angling, a Poem. 12mo. 2nd edit. printed for H. Slater, 1741.

The first edition was entitled Innocent Epicure, *vide postea.*

Angling Excursions of Gregory Greendrake, esq. in the counties of Wicklow, Meath, Westmeath, Longford, and Cavan, with additions by Geoffrey Greydrake, esq. dedicated to all honest Brothers of the Angle. 4th edit. Dublin, 1832.

Arderon's (William) Easy Method of Catching Fish. Philosophical Transactions Abridged, Vol. IX. p. 189.

There are two other papers by Arderon in the same vol. I. On keeping small Fish in Glass Jars. II. On the Banstickle or Prick-le-Back, and also on Fish in General.

Art of Angling, printed by Smeeton, 16mo. principally taken from Markham and Venables.

Art of Angling, wherein are discovered many rare secrets very necessary to be known by all that delight in that recreation. 4to. Lond. 1653. Vide Barker.

Art of Angling, a concise but comprehensive treatise. 18mo. Lewes, 1809.

Bainbridge (Geo. C. Esq.), Fly Fisher's Guide, illustrated by coloured plates, representing upwards of forty of the most useful flies, accurately copied from nature. 8vo. Liverpool, 1816. 2nd edit. 8vo. Lond. 1828. 3rd edit. 8vo. Lond. 1834. (In Blackwood's Mag. No. XXVII. for June, 1819, article 4, is A Few Thoughts on Fly Fishing, suggested by the Review of the 1st edit. of Bainbridge.)

Barlow's (Francis) Several Ways of Hunting, Hawking, and Fishing, invented by himself, and etched by W. Hollar. Oblong 4to. 1671.

Barker's (Thomas, of Bracemeale, Salop) Art of Angling, wherein are discovered many rare Secrets very necessary to be known by all that delight in that recreation. 12mo. Lond. 1651. Reprinted by Burn, Lond. 1820. Another edition in 4to. Lond. 1653, without the author's name subjoined to the Countryman's Recreations. 4to. Lond. 1654. Large 8vo. 1817, reprinted by Inchbold and Gawtress, Leeds.

Barker's Delight; or, the Art of Angling, by Thomas Barker. Second edition, with considerable additions and Commendatory Verses prefixed, 1657, reprinted by Burn, 1820. This book is inserted in the Young Sportsman's Miscellany. 12mo. 1826.

In an Epistle to the Reader prefixed to the first edition, and in the dedication of the second to Lord Montague, Barker speaks of himself as having practised Angling for half a century; adding, if any noble or gentle Angler have a mind to discourse of these ways and experiments, I live in Henry VIIth's Gifts, the next doore to the Gatehouse in Westminster: where I shall be ready to satisfie them and maintain my art; my name is Barker.

The second edition, so called, 12mo. Lond. 1657, with Commendatory Verses prefixed. This is the first edition that has the title of Barker's Delight. The second edition (likewise so called) Lond. 1659; is in fact the same with only a new title page.

Berners, Barnes, or Bernes (Lady Juliana).

1. This present boke shewyth the manere of hawkynge and huntynge: and also of diuysynge of Cote armours? It shewyth also a good matere belongynge to horses: wyth other cōmendable treatyses. And ferdermore of the blaysynge of armys: as here after it may appere. Small Folio.

Juliana Berners, or Barnes, to whom the above Treatises were ascribed, is supposed to have been sister to Richard, Lord Berners, of Essex, and prioress of Sopwell, near St. Albans. She is said to have flourished about the year 1460, and is celebrated for her learning and accomplishments.

Besides being the first printed treatise on the subject in the English language, this work affords us rude representations of the different kinds of tackle in use, and contains directions and remarks which have been copied in some recent Treatises on Angling.

On the first page wood-cut of birds, and on the reverse a group of men with a hawk, underneath the title above.

Sig. a. 5 leaves, the first blank, making 6. b. 6 leaves. c. 6 leaves (Hawkynge ends on C 5, and Huntynge commences on c. 6).

d. 6 leaves. e. 6 leaves (Coat armour commences on e. 6). f. 4 leaves. g. 4 leaves (on reverse of G. 4. Here begynnyth the treatise of fysshynge wyth an Angle). h. 6 leaves. i. 4 leaves. Here begynnyth the blasynge of arms. a. 6 leaves. b. 6 leaves. c. 6 leaves. d. 7 leaves.

Here in this boke afore ben shewed the treatyses perteynynge to hawkynge and huntynge with others dyuers playsaunt materes belongynge unto noblesse: and also a ryght noble treatise of Cot armours? as in this present boke it may appere. And here we ende this laste treatyse whyche specyfyeth of blasynge of armys. Emprynted at Westmestre by Wynkyn the Worde the yere of thyncarnacōn of our lorde. M. CCCC. LXXXVI.

On the last leaf (D 8) is the device of Wynkyn de Worde, and on the reverse that of Caxton. This leaf is wanting in the copy in the British Museum.

Copies upon Vellum are in the Collections of the Earl of Pembroke and the Right Hon. Thomas Grenville: and upon paper in the British Museum; in the late Mr. Douce's Collection, now in the Bodleian; and in the late Mr. Dent's Library. Probably the finest extant upon paper was Mr. Hanrott's, which is now in the Collection of the Hon. George John Vernon.

This edition was reprinted in fac-simile, by Mr. Haslewood, Lond. 1810; and the Treatyse of Fysshing wyth an Angle, from this edition was reprinted by W. Pickering, in Crown 8vo. with Baskerville's Types. Lond. 1827.

The first edition was printed at St. Albans, 1486, containing the Treatises of Hawking, Hunting, and Coat Armour; and reprinted by Markham under the title of "The Gentleman's Academie, or the Booke of St. Albans: containing three most exact of excellent Bookes: the first of Hawking, the second of all the proper termes of Hunting, and the last of Armorie: all compiled by Juliana Barnes, in the yere from the incarnation of Christ, 1486. And now reduced into a better method by G. M. London: printed for Humfrey Lownes, and are to be sold at his shop in Paules Church-Yard, 1595." 4to.

11. Here begynnyth a treatyse of fysshynge wyth an Angle. Small 4to.

The title over the wood-cut of a man angling; on the reverse of D. iiii. Here endeth the boke of Fysshynge wyth other dyuers maters. Imprynted at London by Wynkyn de Worde, dwellynge in Flete strete, at the sygne of the Sonne.

Small 4to. with wood-cuts. A to Diiij. This edition appears to have been published as a distinct treatise: the concluding paragraph of the former edition is omitted stating, "And for by cause that this present treatyse sholde not come to the hondys of eche ydle persone, whyche wolde desire it yf it were enprynted allone by itself, & put in a lytyll plaunflet; therfore I haue compylyd it in a greter volume of dyuerse bokys concernynge to gentyll & noble men. To the entent that the forsayd ydle persones whyche scholde haue but lytyll mesure in the sayd dysporte of fysshyng, sholde not by this meane vtterly dystroye it." The only copy known, which was formerly Mr. Haworth's, is now in the collection of George Wilkinson, esq.

III. The boke of hawkynge, and huntynge, and fysshynge. Small 4to.

Wood-cut group of Men with hawk, as in W. de Worde's edition 1496.

reverse of C 7‖ Thus endeth the boke of hawkynge.

C 8 Here begynneth the boke of huntynge; on reverse of F 1 four lines of the ballad:

Therfore assaye them euerych one, &c.

¶ Thus endeth the treatyse of hūtynge, and other thȳges.

And here begynneth a treatyse of fysshynge wt an angle. Wood-cut underneath.

F 2. Commences Salomon, &c. and ends on reverse of H. iv.

Here endeth the boke of hawkynge, hūtynge, and fysshynge, and with many other dyuers maters. Imprȳted in Flete strete, at yᵉ sygne of yᵉ sonne, by Wȳkyn de Worde with his colophon.

46 leaves.

The catchword throughout the volume is 'Huntynge;' this edition reads "Of Saynt Thomas tyde of Caunterbure."

A copy of this edition, now in the possession of Mr. George Daniel, of Islington, is supposed to be unique.

IV. The booke of hauking hunting and fysshyng, with all the properties and medecynes that are necessary to be kept. Small 4to.

Over a rude engraving on wood, at the end of this portion there is no colophon.

Here beginneth the booke of Hunting whereunto is added the measures of blowing. Over a wood-cut, no colophon.

Here beginneth a tretyse of fysshynge wyth an Angle. Over a wood cut of a man angling.

Imprynted at London in Flete-streate, at the Sygne of the Rose Garlande, by Wylliam Coplande.

B. L. 4to. p. 96.

Described in the Bibliotheca Anglo-Poetica, page 12.

v. The booke of haukyng huntyng and fysshyng, wyth all the properties and medecynes that are necessary to be kepte. Small 4to.

Wood-cut of men and hawks same as in Wynkyn de Worde, edition of 1496. fo.

Imprinted at London in Saynt Martyns paryshe in ye vinetre upon the thre crane wharfe by Wyllyam Coplande. A to E iiii.

Here begynneth the booke of Hunting where unto is added the measures of blowyng.

Rude cut with the Hares.

Imprint as above. Fi to Jiiii.

Here begynneth a tretyse of Fysshynge wyth an Angle. Ki to Miiii.

Heere endeth the booke of Hauking, Hunting, and Fysshyng, with other diuers matters.

Imprynt as above.

Formerly in Mr. Haslewood's Collection. A. to M. each 4 leaves.

vi. The booke of hauking huntyng and fysshyng, wyth all the properties and medecynes that are necessary to be kept. Small 4to.

[Most probably the same cut as in the preceding edition, but the title is wanting.]

Imprynted at London in the Vyentre uppon the thre Craned wharfe by Wyllyam Copland.

Here begynneth the booke of Hunting where unto is added the measures of blowyng.

Imprynted at London in the ventre upon the thre Crane wharfe by me William Copland.

Here beginneth a tretyse of Fysshynge with an Angle. Wood-cut.

Imprinted at London in the Ventre upon the three Crane wharfe by Wyllyam Copland. 4to. A. to M. each 4 leaves. Now in the possession of Mr. Pickering.

VII. The Booke of hauking huntyng and fysshyng, with all the properties and medecynes that are necessary to be kept. Small 4to.

Wood-cut of men and hawks.

Imprynted at London in paules Churche yerde by Robert Toye.

Here begynneth the booke of Hunting, where unto is added the measures of blowyng.

Rude wood-cut.

Imprynted at London, in Flete strete at the signe of the Rose Garland by Wyllyam Copland for Robert Toye.

Here beginneth a tretyse of Fysshynge wyth an Angle.

Imprinted at London in Flete-strete, at the sygne of the Rose Garland by Wyllyam Copland. In the Collection of Earl Spenser.

VIII. The booke of hauking huntyng and fysshyng, with all the properties and medecynes that are necessary to be kept. Small 4to.

Wood-cut of men and hawks as in Wynkyn de Worde's edition.

Imprynted at London in Paules churche yerde by Abraham Vele.

Here begynneth the booke of Hunting where unto is added the measures of blowyng.

rude wood-cut with the hares.

Imprynted at London in Fletestrete at the signe of the Rose Garland by Wyllyam Copland for Robert Toye.

Here beginneth a tretyse of Fysshynge wyth an Angle.

same cut as in Copland's edition.

Imprinted at London in Paules church yarde at the Sygne of the Lambe by Abraham Vele. 4to. A. to M. in 4's. containing 48 leaves.

h. i. reads: 'Of saynt Benet the xi July.'

In Mr. Pickering's possession, formerly Mr. Milner's. Another copy imperfect is in the British Museum.

There are probably two other editions by Copland yet undescribed—one in Lothbury over against St. Margaret's Church; the other, W. Copland for R. Tottell.

IX. The boke of hawkynge huntynge and fysshynge, with all the propertys and medecynes that are necessarye to be kepte. Small 4to.

The treatise of Hawking ends on reverse of E iiij, of Hunting on F ij, and of Fishing on reverse miij.

Each treatise has a distinct Colophon, the last is "Here endeth the boke of Hawkyng, Huntyng, and Fyshyng, with other dyuers matters. Imprynted at London in Paul's chyrchyerde by me Hery Tab. Finis." A to M in 4's.

The only copy known is among Cryne's books in the Bodleian Library.

x. The boke of hawkynge huntynge and fysshynge, with all the propertyes and medecynes that are necessarye to be kepte. Small 4to.

On title wood-cut group of 8 birds.

On the reverse of E. 4. Imprynted at london, in Forster laen, by me, John̄ Waley. Finis.

On F. 1. Here begynneth the boke of huntyng, and ends on the reverse J. ii. Imprinted at London, in Forster Laen by John Waley.

On K. 1. Commences. Here begynneth a treatyse of fysshynge with an angle.

ends on M. 4.

Here endeth the boke of Haukyng, Huntyng, and fysshyng, with other dyuers mathers. Imprynted at London, in Forster laen, by John̄ Waley. Finis.

A. to M. in fours, except I. which has two leaves only. In all 46 leaves.

h. i. reads: 'Of saynte Thomas tyde of Canterbure.'

N.B. This copy may or may not be imperfect, in most copies the measures of blowing are printed on I. iii. and I. iv. with the imprint of the 2nd part. But in this edition the imprint is at the end of the ballad, therefore it appears perfect, it is not mentioned on the title. In the possession of Mr. Pickering.

xi. The boke of haukyng huntynge and fysshyng, with all the properties and medecynes that are necessary to be kepte. Small 4to.

On title Wood-cut of the Hawk within 6 scroll blocks and 2 flowers.

Imprynted at London in Flete strete by Wyllyam Powell.

Here begynneth the booke of huntyng. Where unto is added the measures of blowynge.

Wood-cut with two dogs and a stag, and an ornament composed of four blocks two on each side.

Imprynted at London in Flete strete, at the sygne of the George, next to saynt Dunstones churche by Wyllyam Powell.

Here begynneth a tretyse of fysshynge with an angle.

Wood-cut as in Copland, with a border added in the outer and inner margin.
Imprynted at London in Flete strte at the sygne of George next to saynt Dunstones Church by Wyllyam Powell.
h. i. reads: 'Of saynt Benet the xi. of July.'
In Mr. Pickering's possession, formerly 'Tho. Baker. Col. Jo. Socius ejectus.' A. to M. in 4. containing 48 leaves.

Best's (Thomas) Concise Treatise on the Art of Angling. 12mo. Lond. 1787. 2nd edit. 12mo. Lond. 1789. 3rd edit. 1794. 4th edit. 1798. 5th edit. 1802. 6th edit. 1804. 7th edit. 1807. 8th edit. 1808. 9th. edit. 1810. 10th edit. 1814. (N.B. this edition contains Nobbes' Treatise on Trolling). 11th edit. 18mo. Lond. advertised 1827. Royal 18mo. Lond. 1832.

Binnell's (Robert) Description of the River Thames, &c. with the City of London Jurisdiction and Conservancy thereof, proved both in point and usage, by prescription, charters, acts of parliaments, decrees, &c. &c. To which is added a brief description of those Fish, with their seasons, spawning times, &c. that are caught in the Thames, or sold in London. With some few observations on the nature, element, cloathing, numbers, passage, weirs, and sensation, &c. peculiar to Fish in general, and also of the water carriage, &c. &c. 8vo. Lond. 1758.

Blagrave's (J. Gent.) Epitome of the Art of Husbandry. 12mo. Lond 1669, contains brief experimental Directions for the right use of the Angle, reprinted. 8vo. Lond. 1670. 8vo. Lond. 1685.

Blome's Gentleman's Recreations, Treating on the Art of Horsemanship, Hunting, Fowling, Fishing, and Agriculture. Fol. Lond. 1686. Fol. Lond. 1710.

Boult's Sportsman's Companion, 3 vols. including Angling.

Boaz (H.), the Angler's Progress, written July 4th, 1789. (a broadside). 2nd edit. 8vo. Lond. 1820. 3rd edit. Lond. 1820. 4th edit. Newcastle, 1820.

Bowlker (Richard, of Ludlow), The Art of Angling, improved in all its parts, especially Fly-fishing. 12mo. Worcester (supposed date 1746). 2nd edit. by Charles Bowlker, of Ludlow, his son. 8vo. 1774. Birmingham, Baskerville. 3rd edit. 1780. 4th edit. 1786. 5th edit. 1792. A new edition, 8vo. Ludlow, 1806. 8vo. Ludlow, 1814. 12mo. Ludlow, 1829.

*** A dextrous family of Trout Anglers who lived in Ludlow.—*White.*

Boyle's (Hon. Robert) Angling improved to spiritual uses, forms part of a volume entitled Occasional Reflections upon several subjects. 8vo. Lond. 1665. 2nd edit. 1669. A new edition, with preface and life by Leyland, 12mo. Lond. 1808.

Briefe Treatise of Fishing; with the Art of Angling. 4to. Lond. 1614. (This forms a part of the Jewell for Gentrie, by T. S. and is in fact but a reprint of the work ascribed to Juliana Barnes).

Brookes (Dr. R.), The Art of Angling, Rock and Sea Fishing, with a Natural History of River, Pond, and Sea Fish. 8vo. Lond. 1740. The prints chiefly borrowed from Willoughby, and the Treatise of Angling from Chetham. 2nd edit. 8vo. Lond. 1743. Improved, with additions, and formed into a Dictionary, 8vo. Lond. 1766. 2nd edit. 17 - -. 3rd edit. Lond. 1770. 4th edit. 1774. 5th edit. Lond. 1781. 6th edit. Lond. 1785. 7th edit. Lond. 1789. "A new edit." Lond. 1793, 1801, 1807, and Dublin, 1811.

Brookes (R.), The Natural History of Fishes and Serpents, to which is added an Appendix, containing the whole art of Float and Fly Fishing. 8vo. Lond. 1790.

Browne's (Moses) Piscatory Eclogues were first published without his name, in 1729. A second edition was published, with his poems on various subjects, in octavo, 1739. (The author states that these poems were written in his twenty-third year.) A third in an extended form, by itself, accompanied with notes, in 1773. In 1750, Moses Browne edited Walton and Cotton's Angler, with a preface and notes, and some valuable additions; this was republished in 1759 and 1772, in the former year drawing him into a controversy with Sir John Hawkins, who happened to be then publishing an improved edition of the same work.

Brown's (Dr. Patrick) Catalogue of the Fish of Ireland.

Inserted in Exshaw's Gentleman's and London Magazine, Aug. 1774.

Carroll (W.), The Angler's Vade Mecum, containing an account of the Water Flies, their seasons, the kind of weather that brings them most on the water, the whole represented in twelve coloured plates; to which is added a description of the different baits used in Angling, and where found. 8vo. Edin. 1818.

Charfy (Guiniad), The Fisherman; or, Art of Angling made easy. 8vo. Lond. n. d. 2nd edit. 8vo.

Charleton (T. W. Royal Navy), The Art of Fishing, a poem. 8vo. North Shields, 1819.

Chetham's (Jas. of Smedley) Angler's Vade Mecum; or, a compendious, yet full discourse of Angling. 8vo. Lond. 1681. 2nd edit. 8vo. Lond. 1689. 3rd. edit. 8vo. Lond. 1700.

Mr. White, of Crickhowell, observes, "The author of this work is said to be of a noted family."

Clifford (Charles), The Angler, a Didactic poem. 12mo. Lond. 1804.

Cockayne's Rules for Angling; or, Young Instruments. 1670.

Cole (Ralph, Gent.), The Young Angler's Pocket Companion. 12mo. Lond. 1795, 1813.

Complete Family Piece, and Country Gentleman and Farmer's Best Guide.—2nd edit. 8vo. Lond. 1737, part II. Chap. II. p. 329 to 350. "Containing Cautions, Rules, and Directions to be taken and observed in Fishing; with the manner of making and preserving Rods, Lines, Floats, Artificial Flies, &c. &c. and for chusing and preserving several sorts of curious baits."

Compleat Fisher; or, the true Art of Angling, by J. S. See True Art of Angling.

Cotton's (Charles) Compleat Angler, being instructions how to angle for a Trout or Grayling in a clear stream. Lond. 1676; forming a second part to Walton. Vide Walton.

Countrey Gentleman's Companion. 2 vols. 12mo. Lond. 1753. Named in the title by a Country Gentleman, from his own experience, and printed for the author. It is however nothing more than a reprint of Markham's work without acknowledgment. The Treatise on Angling occurs; vol. ii. p. 61—106.—Second edit. 8vo. Dublin, 1755, reprinted in one volume.

Cox's (Nicholas) Gentleman's Recreation, in four parts, viz. Hunting, Hawking, Fowling, Fishing, and Agriculture. 8vo. Lond. 1674. 2nd edit. 8vo. Lond. 1677. 3rd edit. 8vo. Lond. 1686. 4th edit. 8vo. Lond. 1697. 5th edit. 8vo. Lond. 1706. 6th edit. 8vo. Lond. 1721.

Daniel's (Rev. W. B.) Rural Sports. 2 vols. 4to. Lond. 1801-2. 3 vols. royal 8vo. Lond. 1801. 3 vols.

imperial 4to. Lond. 1805. 3 vols. royal 8vo. 1812. Large Paper, in 4to.

The edition of 1805 has considerable additions, which have extended the work to three volumes. It likewise contains additional plates, and proofs of all the larger subjects, which were originally taken off for separate sale.

Supplement to the Rural Sports. Royal 8vo. 4to. and imperial 4to. Lond. 1813.

The Supplement contains Anecdotes of Fish and Fishing, an Account of the Rivers of Great Britain, &c.

Davy's (Sir Humphry, bart.) Salmonia; or, Days of Fly Fishing, in a series of conversations, with some accounts of the habits of Fishes belonging to the genus Salmo. 8vo. Lond. 1828. 2nd edit. with engraved views, 8vo. Lond. 1829. 3rd edit. 8vo. Lond. 1832.

*** A review of this work appeared in the Quarterly, attributed to Sir Walter Scott, and another by Professor Wilson, in Blackwood's Magazine.

D[ennys] (J[ohn], Esq.) Secrets of Angling, teaching the choicest Tooles, Baytes, and Seasons for taking of any Fish in pond or riuer, practised and familiarly opened in three bookes, by J. D. Esquire. 12mo. Lond. 1613. Second edition, augmented with many approved experiments, by W. Lauson. Lond. printed by Roger Jackson, 1652.

This poetical treatise is entered in the Stationers' Books as by John Dennys; but Walton ascribed it to John Davors, and by others without sufficient authority it is ascribed to Davies and Donne. It contains commendatory Verses by Jo. Davies, and is dedicated by the Stationer R. J. to Mr. John Harborne, of Tackley, in the county of Oxford.

In the title of this book, is a wood-cut representing two men, one with a sphere at the end of his angle, and on a label,

Hold, hooke and line,
Then all is mine—

the other with a fish,

Well fayre the pleasure
That brings such treasure.

Reprinted in the Censura Literaria, with a short advertisement, and an index. 8vo. Lond. 1811. (a hundred copies taken off separately.)

Beloe says, "Perhaps there does not exist in the circle of English Literature a rarer book than this.—Sir John Hawkins confessed he could never get a sight of it."—Anecd. of Literature, vol. ii. p. 64.

Dictionarium Rusticum Urbanicum et Botanicum, or Dictionary of all kinds of Country Affairs. 8vo. Lond. 1704. 2nd edit. 1717.—3rd edit. 2 vols. 8vo. Lond. 1726.

Donovan's (E. O.) Natural History of British Fishes; including scientific and general descriptions of the most interesting species, and an extensive collection of accurately finished plates, taken entirely from original drawings, purposely made from the specimens in a recent state, and for the most part when living. 5 vols. royal 8vo. Lond. 1802-8.

Dubrauius's Newe Booke of good Husbandry, very pleasant and of great profite both for Gentlemen and Yeomen, conteining the order and manner of making fish pondes, with the breeding, preseruing, and multiplyinge of the Carpe, Tench, Pike, and Troute, and also divers kinds of other Fresh Fish, translated from the Latine. 4to. London, 1599.

Ellis's (Sir Henry) Catalogue of Books on Angling, with brief notes of several of their authors, printed in the British Bibliographer, and a few copies taken off separately. 8vo. 1811. Reprinted in the Supplement to Daniel's Rural Sports, without acknowledgment.

Egan's (Pierce) Book of Sports. 8vo. Lond. 1832. No. IX. p. 137 to 142, a portion of the conference between

an Angler, a Hunter, and Falconer (from Walton), No. XVIII. p. 272. The Jolly Anglers (a collection of some Angling songs, and completion of the conference).

Essay on the Right of Angling in the River Thames, and in all other public Navigable Rivers. 8vo. Reading, *n.d.* A Letter to a proprietor of a Fishery in the River Thames, in which an attempt is made to shew in whom the Right of Fishing in public streams now resides. 2nd edit. 8vo. Reading, 1787.

Evans (W. of Uxbridge), The Art of Angling; or, Complete Fly Fisher. 8vo. Uxbridge, Lake, 1820. 8vo. London, Richardson.

(This book is taken almost verbatim from Bowlker's Treatise.)

Fairfax's Complete Sportsman; or, Universal Angler. 12mo. Lond. 1758. 12mo. 1795.

Fisher (P.), Angler's Souvenir, with illustrations by Beckwith and Topham. 12mo. Lond. 1835.

Fisherman's Assistant in the Thames. 8vo. 1697.

(See Thomas Martin, of Palsgrave, Catalogue. 8vo. Lynn, 1772.) Probably the same work as Laws and Ordinances of the City of London relating to Fishing. 1697. *post.*

The Fisherman; or, Complete Guide for Anglers. Lond. 1814.

Fishing and Hunting. 12mo. Lond. printed by Bailey.

Fletcher's (Rev. Phineas, Rector of Hilgay, Norfolk) Sicelides, a Piscatory, as it hath been acted in King's College. 4to. Cambridge, 1631.

Fletcher's (Rev. P.) Purple Island, or the Isle of Man: together with Piscatorie Eclogs and other Poeticall Miscellanies. 4to. Cambridge, 1633.

Fletcher's (Rev. P.) Piscatory Eclogues, with other

Poetical Miscellanies and copious notes, [by Lord Woodhouslee]. 8vo. Edin. 1771.

Ford's (D.D.) Piscatio; or, Angling, a poem written originally in Latin, and inscribed to Arch. Sheldon. 8vo. Oxon, 1733. Again published with original poems by the same author, by George Sylvester, Gent. 8vo. Lond. 1733. The original is in Musarum Anglicanarum Analecta, &c. 8vo. Oxon, 1692. p. 129.

Franck's (Richard) Northern Memoirs, calculated for the Meridian of Scotland. Wherein most or all of the cities, citadels, sea-ports, castles, forts, fortresses, rivers, and rivulets, are compendiously described. Together with choice collections of various discoveries, Remarkable Observations, Theological Notions, Political Axioms, National Intrigues, Polemick Inferences, Contemplations, Speculations, and several curious and industrious Inspections, lineally drawn from Antiquaries and other noted and intelligible persons of honor and eminency. To which is added the Contemplative and Practical Angler, by way of diversion. With a narrative of that experimented in England, and perfected in more remote and solitary parts of Scotland. By way of Dialogue. Writ in the year 1658, but not till now made publick. 8vo. Lond. 1694. New edit. with preface and notes, by Sir Walter Scott. 8vo. Edin. 1821.

N.B. only 250 copies of this edition printed. One of the most curious parts of this work, p. 272, relates to the Burbolt, a fish rarely found, even in the Trent, &c.

Franck was a Captain in the Royal Army, under prince Rupert, and was at the battle of Brentford, Nov. 12, 1642, where they were conquerors, and drove the rebels into the sea.—*White.*

Gardiner. A Booke of Angling, or Fishing. Wherein is shewed, by conference with Scriptures, the agreement betweene the Fisherman Fishes, and Fishing of both na-

tures, Temporall and Spirituall. By Samuel Gardiner, Doctor of Divinitie.

Matthew iv. 19. I will make you fishers of men.

18mo. London: Printed by Thomas Parfoot, 1606.

Dedicated to Sir Henrie Gaudie, Sir Miles Corbet, Sir Hamond Le Strange, Sir Henry Spellman, Knights, my verie kind friends.

In the collection of the Rev. Mr. Cotton.

Gentleman Farmer, containing North's Discourse of Fish and Fish Ponds. Lond. 1726.

Gentleman Angler, containing short plain instructions whereby the most ignorant beginner may, in a little time, become a perfect artist in Angling for Salmon, &c. &c. 8vo. Lond. 1726. 2nd edit. 8vo. 1736. 3rd edit. 8vo. Lond. Hitch, without date. 8vo. Lond. 1753. 12mo. Lond. Kearsley, 1786.

This work was again printed as a novel publication, in 1786, viz. as above by a gentleman, who has made it his diversion upwards of fourteen years.

(In the first and other editions twenty-eight years' experience.)

Gentleman's Recreations for 1836. 12mo. Sherwood.

Gilbert's (William, Gent.) Angler's Delight, containing the whole art of neat and clean Angling; wherein is taught the readiest way to take all sorts of Fish, from the Pike to the Minnow, together with their proper baits, haunts, and time of fishing for them, whether in mere, pond, or river. As also the method of fishing in Hackney River, and the names of the best stands there; with the manner of making all sorts of good tackle fit for any water whatsoever. Dedicated to Sir Richard Fisher. 12mo. Lond. 1676.

In this book, the Angler's Delight, at p. 14, we read of Barbel frequenting London Bridge; p. 31 the fresh title of the second part.

The method of fishing, &c. occurs, p. 38. "Then go to Mother Gilbert's, at the Flower de Luce, at Clapton, near

Hackney, and whilst you are drinking a pot of ale, bid the maid make you two or three pennyworth of ground bait, and some paste (which they do very neatly and well), p. 40. There is an excellent stand in the second meddow, on the left hand, beyond the ferry, under a willow tree; in the midst of the meddow by the water side."

Mr. Haslewood, noticing the edition of 1676, says, "there was probably an earlier edition, from the date of the licence for the press that being," with allowance, October 20, 1674, Roger L'Estrange.

The second edition was reprinted in fac-simile, about 1780, by a bookseller in Holborn.

Griffith's (Roger, Water Bailiff,) Essay to prove that the Jurisdiction and Conservancy of the River Thames, &c. is committed to the Lord Mayor and City of London, both in point of Right and Usage. To which is added, a Description of those Fish which are caught in the River Thames. 8vo. Lond. 1746. See Binnell.

G[ryndall's](W[illiam]) Hawking, Hunting, Fouling, and Fishing, with the true measures of Blowing, now newly collected by W. G. Faukener. 4to. Lond. Islip, 1596. Hawking, Hunting, and Fishing, with the true measures of Blowing. Newly corrected and amended, 4to. Lond. Edw. Alde, 1596.

This book has a square wood-cut in the lower part of the title, of a man with several hooks near him. A copy of the wood-cut occurs in one of Bagford's volumes of scraps, in the Harleian Collection of Manuscripts, in the British Museum. In Alde's edition 'Fowling' is omitted.

Hanover Magazine, No. 23, March 21, 1763, contains the translation of a letter giving an account of a method to breed Fish to advantage. 8vo. Lond. 1778.

Hansard's (George Agar) Trout and Salmon Fishing in Wales. 8vo. Lond. 1834.

Hawker's (Lt. Col. P.) Instructions to Young Sportsmen, in all that relates to guns and shooting. 8vo. Lond. 1824. (P. 162 to 183 relates to Trout Fishing, &c. &c.)

Hints to Anglers; or, the Art of Angling Epitomised in

verse, with explanatory notes by T. F. S [alter], an old Piscator, containing directions for making ground baits, pastes, &c. 8vo. Lond. 1808.

Howitt. Vide Angler's Manual.

Howlett's (Robert,) 'near forty years a practitioner in this art' School for Recreation; or, a Guide to the more Ingenious Exercises. (P. 158 to 182 on Fishing.) 8vo. Lond. 1701. 8vo. Lond. 1710. 8vo. Lond. 1720. 8vo. Lond. 1732. Vide Angler's Sure Guide.

Husbandman (The Perfect), or the Art of Husbandry; by C. H. B. C. and C. M. 4to. Lond. 1658. Page 346 to 355 of Fish Ponds and Fish.

Husbandman's Jewel, with the Art of Angling, including Fish and Fish Ponds.

Innocent Epicure; or, the Art of Angling, a Poem. 12mo. Lond. 1697. 2nd edit. 12mo. 1741, with the title of Angling, a Poem, only.

The preface is by N. Tate, to the first edition, to whom it is sometimes attributed, but the initials of the compiler head the introductory epistle, J. S. to C. S. supposed to be the same with the author of the True Art of Angling.

Johnson's (T. B.) Sportsman's Cyclopedia; being an Elucidation of the Science and Practice of the Field, the Turf, and the Sod; or, in other words, the Scientific Operations of the Chase, the Course, and of all those Diversions and Amusements which have uniformly marked the Character of the Inhabitants of these Islands; and which are so ardently cherished, and so extensively followed by the present generation: comprehending the Natural History of all those Animals which constitute the objects of pursuit, accompanied with Illustrative Anecdotes. 8vo. Lond. 1831.

Jacob's (Giles) Game Law; or, Persons qualified to

kill Game, keep Dogs, Nets, &c.; and of Hawking, Hunting, Fishing, and Fowling. 7th edit. 8vo. Lond. 1740.

Jacob (Giles), The Complete Sportsman, in three parts, relating to Game, Dogs, Shooting, and Hunting, &c. Part III. of Fish and Fishing. The most successful methods of Angling, Baits, Tackle, Seasons, &c. 12mo. Savoy, printed for J. Tonson, 1718.

Jacob's (Giles) Country Gentleman's Vade Mecum, contains a few pages on Fish, Angling, and Fish Ponds, p. 25 to 31. Lond. 1717.

Jesse's (Edward, esq. Deputy Surveyor of His Majesty's Parks) Gleanings in Natural History, with Local Recollections, to which are added Maxims and Hints for an Angler. 8vo. Lond. 1832. Second Series, 8vo. Lond. 1834. Third Series, 1835.

Thames Fishing, by the author of Gleanings in Natural History. See Fraser's Mag. No. XLIX. Jan. 1834.

Jewell for Gentrie; being an exact Dictionary, or true Method to make any man understand all the Arts, Secrets, and Worthy Knowledges belonging to Hawking, Hunting, Fowling and Fishing, together with all the true measures for winding the Horne. Now newly published, and beautified with all the rarest experiments that are known and practised at this day. Printed at London for John Helme, in St. Dunstan's Church Yard, in Fleet Street, 1614, 4to. Vide Briefe Treatise of Fishing.

Jolly Angler; or, Water-side Companion. 8vo. Lond. Wilson, 1833.

Kentish Angler; or, the Young Fisherman's Instructor, shewing the nature and properties of Fish, which are angled for in Kent. 12mo. Canterb. 1804.

Kresz's (the younger) Treatise on Angling, as practised in France, with plates of Artificial Flies, published in the Sporting Mag. Vol. xxiii. 8vo. Lond. 1829, p. 137 to 142, also p. 219 to 224, and in Vol. xxiv. p. 2 to 30, and page 84 to 88.

Lambert's (James) Country Man's Treasure, to which is added the Art of Hawking, Hunting, Angling, &c. 8vo. Lond. 1676, 1683.

Lascelles (Robert, Esq.), Angling, Shooting, and Coursing. 8vo. 1815. Second edition, 8vo. Lond. 1818.

Lathy (T. P. Esq.), The Angler, a Poem in ten cantos, comprising proper instructions in the Art, Flies, Bait, Pastes, &c. with upwards of twenty beautiful cuts. 8vo. Lond. 1820.

This Poem is only a rifacimento of The Anglers' Eight Dialogues in Verse, without acknowledgment; some copies are dated 1819 with the following title, "The Angler, a Poem in ten cantos, by Piscator." Vide Gentleman's Magazine, 1819, Part II. p. 405.

Twenty copies were printed on thick paper, and one on vellum.

Laws and Ordinances of the City of London relating to Fishing. 1697.

London Angler's Book; or, Waltonian Chronicle, containing much original information to Anglers generally, combined with numerous amusing songs, and anecdotes of Fish and Fishing, never before published, &c. 8vo. Lond. 1834.

Mackintosh (Alexander, of Great Driffield, Yorkshire), The Driffield Angler, in two parts; or, Complete English Angler. 18mo. Gainsborough.

(An association called the Driffield Anglers was formed of noblemen and gentlemen, 1833, to preserve the streams in the vicinity from poachers and depredations.)

Markham's (Gervase) Cheap and Good Husbandry. 4to. Lond. 1615. contains a short chapter on Fish and Fish ponds, 1616. 1631. 1648. 13th edition, 1676.

Markham's (Gervase) Young Sportsman's Delight, and Instructor in Angling, Fowling, Hawking, Hunting. 32mo. sold at the Golden Ring, in Little Britain, price 6*d*. Lond. 1652. Reprinted by Gosden, 1820.

(Advertised 1744 by a second title as) A Compleat and Experienced Angler, in two parts; or, the Angler's Vade Mecum. 12mo. printed for Conyers.

Among the additions by Gervase Markham to Maison Rustique; or, the Countrey Farme, compiled in the French tongue, by Charles Stevens and John Liebault, also translated by Richard Surflet. Fol. Lond. 1616. Book IV. Chap. xi.—xvii. relate to the Poole, Fish pond, and Ditch, for Fish. In the modern editions of La Maison Rustique will be found much useful matter relating to Angling and Fishing, as now practised in France.

Markham's (Gervase) Countrey Contentments; or, the Husbandman's Recreations. 1st edit, 4to. Lond. 1611. 2nd edit. 1613. 3rd edit. 1615. 4th edit. 1631. 5th edit. 1635. 6th edit. 1639. 7th edit. 1640. 8th edit. 1649. 9th edit. 1656. 10th edit. 1668. 11th edit. 1675.

The first edition does not contain the Treatise on Angling. The Treatise is headed, "The whole Art of Angling; as it was written in a small treatise in rime, and now for the better understanding of the reader put into prose, and adorned and enlarged." The rimes from which the Art of Angling was taken, were probably those by John Dennys, in his Secrets of Angling, 1613. It is word for word the same as the Treatise published under the title of "The Pleasures of Princes," vide postea.

Marshall (Charles, Vicar of Brixworth, Northamptonshire), A Plain and Easy Introduction to the Knowledge and Practice of Gardening, with Hints on Fish and Fish Ponds. 12mo. Lond. 1796. 2nd edit. 12mo. Lond. 1798. 3rd edit. Lond. —. 4th edit. 8vo. Lond. 1805. 5th edit. 8vo. Lond. 1813.

Martin's (J.) Angler's Companion and Guide to the Whitehouse Fishery; to which is added, a Trip to Broxbourn, or a Trolling Excursion. 12mo. London, Cowie and Strange, *n. d.*

Mascall (Leonard), Booke of Fishing with Hooke and Line, and all other instruments thereunto belonging; also of sundrie Engines and Traps, to take Polcats, Buzzards, Rats, Mice, &c. &c. with very curious wood-cuts of the pike and proche hook, instruments, &c. &c. 4to. Lond. 1590, printed by John Wolf. Lond. 1596. Lond. 1600. Lond. 1606.

This Treatise contains a few improvements on Juliana Barnes, with remarks on the preservation of fish in ponds.

Maxims and Hints for an Angler, and Miseries of Fishing. Illustrated by Drawings on Stone, to which are added Maxims and Hints for a Chess Player. Crown 8vo. Lond. 1833. Murray.

This volume is attributed to Richard Penn, esq. the grandson of William Penn, the founder of Pennsylvania.

Medwin (Thomas, Esq. late of the Guards), The Angler in Wales; or, Days and Nights of Sportsmen. 2 vols. 8vo. Lond. 1834.

Moore's (Sir J.) England's Interest; or, the Gentleman and Farmer's Friend. 12mo. Lond. 1703. 12mo. Lond. 1721. P. 99 to 157 contains the Angler's Sure Guide.

Morgan's Compleat Sportsman (including Angling). 12mo.

Names of Fish and their Seasons. 4to. [a broadside?]

Needham (T. H.), The Complete Sportsman. 8vo. Lond. 1817.

(Page 300—311, Angling, and Laws relating to Fish).

Neil's Complete Angler; or, the Whole Art of Fishing. 8vo. 1804. 10th edit. 8vo.

Nelson's (William) Laws of England concerning the Game of Hunting, Hawking, Fishing, and Fowling. 12mo. 1727, 1732, 1751, 1753, 1762.

New and Excellent Experiments, and Secrets in the Art of Angling; being directions for the whole art. 12mo. 1st edit. 1675. 2nd edit. Lond. 1677. 3rd edit. 1684. Vide Accomplished Lady's Delight.

Newcastle Angling Garlands, by the Waltonian Club, instituted there April, 1822:—

Mitchell (W. A.) on the Pleasure and Utility of Angling, a paper read to the club, 1824.—Angler's Progress; a Poem. By H. Boaz, Newcastle, printed by Charnley, 1820.—Tyne Fisher's Farewell to his Favourite Stream; or, the Approach of Winter, by W. G. T. Newcastle, 1824.—Fisher's Garland for 1821, by R. R. Newcastle. For 1822, by W. G. T.—Coquet Side; or, the Fisher's Garland for 1823, by R. R. Newcastle.—The Fisher's Garland for 1824, by R. R.; for 1825, by R. R.—The Fisher's Garland for 1826, by R. R. Newcastle.—The Fisher's Call for 1827, by W. G. Newcastle.—The Fisher's Garland for 1828, by T. D.; for 1829, by T. D.; for 1830, by R. R.; for 1831, by W. G. T.; for 1832, by R. R. Newcastle.

Nobbes' (Rev. Robert, M. A. of Northampton) Complete Troller; or, the Art of Trolling. 8vo. Lond. 1682. 2nd edit. same date, reprinted in fac-simile about 1770 or 1790. 3rd edit. prefixed to the Angler's Pocket Book. 8vo. Norw. no date. 4th edit. appended to another edition of the Angler's Pocket Book. 8vo. Lond. 1805. Nobbes' Art of Trolling. New edition, 8vo. Lond. 1814.

From the circumstance of the author of this work signing himself M. A. at the end of his verses on the Antiquitie and Invention of Fishing, and from the Commendatory Verses by Cambridge men in the first edition of this work,

printed 1682, I suspect him to have been the Robert Nobbes mentioned in Bishop Kennet's Manuscript Collections, as holding the Vicarages of Apethorp and Wood Newton, in Northamptonshire, in 1676. I believe he succeeded Dr. Robert South.—Sir H. E.

North's (Hon. Roger) Discourse of Fish and Fish Ponds. Done by a Person of Honour. 8vo. Lond. printed for Curl, 1713, 1714, 1715. Large 4to. Lond. 1770, with the author's name in the title page.

(This work is also found in an appendage to the Gentleman Farmer. 8vo. Lond. 1726. See also Albin's Esculent Fish.)

North Country Angler; or, the Art of Angling, as practised in the Northern Counties of England. 8vo. Lond. 1786. 2nd edit. 1787. 3rd edit. 8vo. Leeds, 1800 4th edit. 12mo. Lond. Richardson, 1801. 5th edit. 8vo. Lond. 1817.

Oliver's (Stephen the younger, of Aldwark) Scenes and Recollections of Fly Fishing, in Northumberland, Cumberland, and Westmoreland. 8vo. Lond. 1834.

Oppian's Halieulicks of the Nature of Fishes and Fishing of the Ancients; in five books. Translated from the Greek (into English verse), with an Account of Oppian's Life and Writings, and a Catalogue of his Fishes. 8vo. Oxford, 1722.

"This is a creditable performance. The translators were Mr. Diaper and Mr. Jones, both of Baliol College."—*Watt.*

Peacham (Henry), The Complete Gentleman. 4to. Lond. 1634, 1661.

There is a chapter concerning fishing in the second and third editions of this work, but not in the first edit. 1622.

Perpetual Memorandum, and Universal Pocket Book, for Ladies, Gentlemen, and Men of Business, together with the Complete Art of Angling, with the different baits, &c. in every month of the year. 8vo.

(The advertisement of this little treatise, which consists of only thirty-three pages, is dated Penrith, 1791.)

Piscatorial Reminiscences and Gleanings, by an Old Angler and Bibliopolist. Fscap. 8vo. Lond. Pickering, 1835.

Plan for the Improvement of the Fishery in the River Thames. 8vo. Lond. 1787.

Pleasures of Princes; or, Good Men's Recreations, containing a Discourse of the General Art of Fishing with the Angle, or otherwise, of all the hidden secrets belonging thereunto, together with the choyce, ordering, breeding, and dyetting of the fighting cocke, being a worke never in that nature handled by any former author. 4to. Lond. 1614. 4to. Lond. printed by T. S. for John Browne, 1615. 4to. Lond. 1635, Norton.

(This work forms a part of the second booke of G. Markham's English Husbandman, but not with a copy of 1613, and also printed in Markham's Country Contentments.

Pollard (Richard, Esq. of Clapton), The New and Complete Angler; or, Universal Fisherman. 8vo. Lond. 1802.

Practical Observations on Angling in the River Trent; by a Gentleman resident in the neighbourhood, who has made the amusement his study for upwards of twenty years. [Charles Snart, attorney, Newark]. 8vo. Newark, 1801. 12mo. London, Robinson, 1812.

Rawling's Sermon, preached at Mercers' Chapel, "Fishermen Fishers of Men." Lond. 1609.

Rennie's (James, M.A. professor of Zoology, King's College) Alphabet of Scientific Angling, for the Use of Beginners (with a portrait of Christopher North). 12mo. Lond. 1833.

Royal Fishing Revived. 4to. 1670.

Royal Trade of Fishing. 4to. Lond. 1662.

Rules and Orders for Fishing in the Thames and in the Waters of the Medway. 8vo. 1785. Vide Binnell and Griffith.

Salter (Robert, Esq.), The Modern Angler, being a practical Treatise on the Art of Fishing, &c. in a series of letters to a friend. Oswestry. 1811.

The letters were addressed to the Rev. Morgan Pryse.

Salter (T. F. Gent. of Clapton), The Angler's Guide, being a New, Plain, and Complete Practical Treatise on Angling, for Sea, River, and Pond Fish, deduced from many years' experience and observation. 8vo. Lond. 1814. 2nd edit. 8vo. Lond. 1815. 3rd edit. 8vo. Lond. 1815. 4th edit. 8vo. Lond. 1816. 5th edit. 8vo. Lond. —. 6th edit. 12mo. Lond. 1826. 7th edit. 12mo. Lond. 1830. 8th edit. 12mo. Lond. 1833.

(The Troller's Guide was added to the 12mo. and later editions.)

Salter's Young Angler's Guide; abridged from the above work. 18mo.—2nd edit. 12mo. Lond.—3rd edit. 12mo. Lond. 1829.

Salter's Troller's Guide, being a Complete Practical Treatise on the Art of Trolling or Fishing for Pike and Jack, with twenty-eight plates. 12mo. Lond. 1820.—12mo. 2nd edit. 1830. See Hints to Anglers.

Sannazarius's (Ja.) Ocers, a Pastoral, translated from the Latin of Sannazarius, with some Account of Sannazarius and his Piscatory Eclogues. 4to. Camb. 1724.

Sannazarius's Piscatory Eclogues, by Rooke. 8vo. Lond. 1726.

Saunders (James, Esq. of Newton Awbery, upon Trent), The Compleat Fisherman, or Universal Angler, being a large and particular account of all the several

ways of Fishing now practised in Europe. 12mo. Lond. 1724. 2nd edit. Lond. 1778. 4to. edit. Fielding and Walker, Lond. n. d.

(The first author that mentions silk-worm gut.)

School for Reform; or, Guide to the most Ingenious Exercises. 8vo. Lond. 1701.

Schulte's (Henry) Essay on Aquatic Rights, intended as an illustration of the law relative to Fishing, &c. 8vo. Lond. 1811.

Secrets of Angling, by C. G. a brother of the Angle. 12mo. Lond. 1705.

Shillinglaw (Rev. Thomas), A New System of Angling. 2 vols. 18mo. intended to have been published by subscription, but never appeared.

Shirley's (Thomas, of Richmond, Surrey) Angler's Museum; or, the whole Art of Float and Fly Fishing, with portrait of Kirby, the celebrated Angler. 12mo. Lond. 1784. 2nd edit. 12mo. 3rd edit. 12mo.

Smith's (Dr.) Account of the Fishes in Massachusetts, and Observations on Angling. 8vo. Boston, 1833.

Smith (Thomas) Every Man his own Fisherman. 24mo. Lond. published about 1770 or 1776.

Songs of the Chace. 8vo. Lond. 1811.

(In this book are twenty-four Songs on the subject of Angling.)

Sporting Magazine, 2nd series, contains the following interesting information to Anglers:

Piscatory Chit-Chat, in four letters. Vol. xiii. p. 52, 120, 254, 339.

Fishing on the Dee. Vol. xiv. p. 82.

On Stocking Ponds. Vol. xiv. p. 157.

On Fly Fishing. Vol. xiv. p. 283. Vol. xv. p. 146.

Barbolt, engraving of, and account of. Vol. xv. p. 168.

King's Arms, Rye House, River Lea. Vol. xix. p. 73.

Walthamstow Ferry Fishery. Vol. xxiii. p. 52.

Roach. Vol. xxiv. p. 285. Dace, p. 420.

Fly Fishing in Wales. Vol. xxiv. p. 270. 345. 403.

Sportsman's Dictionary; or, the Country Gentleman's Companion in all Rural Recreations. 2 vols. 8vo. 1735. 4to. [ ] 8vo. by Johnson, containing a full account of Angling in general, and Roach Fishing in particular.

Stevenson (M.), The Twelve Months; or, a pleasant and Profitable Discourse of every action, whether of Labour or Recreation, proper to each particular Month, branched into directions relating to Husbandry, as Plowing, Sowing, Gardening, Planting, &c. &c. also the ordering of Cattle and Bees: of Recreations, as Hunting, Hawking, Fishing, Fowling, Coursing, &c. Likewise is added necessary advice touching physick, &c. 4to. Lond. 1661.

Stoddart's (Thomas Tod) Art of Angling, as practised in Scotland. 12mo. Edin. 1835.

Sylvester's Poems, containing also Piscatio; or, Art of Angling. 8vo. Oxford, 1733. Vide Ford.

Tabella Cibaria. The Bill of Fare: a Latin poem, implicitly translated, and fully explained in copious and interesting notes, relating to the Pleasures of Gastronomy and the mysterious Art of Cookery. 4to. Lond. 1820.

This learned work contains some curious notes upon Fish, and was written by the Abbe M'Quin.

Taverner's (John) Certaine Experiments concerning Fish and Fruite, practised by him, published for the benefit of others. 4to. printed by W. Ponsonby, 1600.

(On the family of John Taverner, see Master's Hist of C.C.C. Cambridge.)

Tate's Art of Angling, a Poem. 1741. Vide Innocent Epicure.

Taylor's (Sam. Gent.) Angling in all its Branches, reduced to a Complete Science, in three parts. 8vo. Lond. 1800.

True Art of Angling, by J. S. Gent. a Brother of the Angle. 24mo. Lond. 1696. 2nd edit. Lond. —. Compleat Fisher; or, True Art of Angling, by J. S. the 3rd edit. 24mo. Lond. 1704. 4th edit. 24mo. Lond. 1716. 5th edit. 24mo. Lond. 1725.

The Complete Fisher; or, True Art of Angling, revised and corrected. 24mo. Lond. 1740, printed for Onesimus Ustonson.

(At the back of the title is a recommendation of the work signed

Wm. Wright.	Rob. Lewes.
Rob. Cole.	Roger Filewood.
Wm. Andrews.	Phillips Brice.
J. Turner.	J. Hollings.

which asserts that "this book has passed several editions.") The places round London for Angling noticed in this work are worth attention.

Sir H. Ellis has another edition of this work in his own library, without date, printed for J. Hazard and J. White.

There is another edition of the same size, title, and date, with a different wood-cut at the beginning, and with material variations.

Vanier's Book upon Fish, translated by the Rev. J. Duncombe, with a brief Introduction, and passages from English Writers, selected as notes. 8vo. Lond. 1809.

(This Translation of Vanier was inserted entire in the Censura Literaria, by Mr. Haslewood, the separate copies to which the title was added were but few; the whole was printed by Daniel, in his Supp. to Rural Sports.)

Venables (Colonel Robert), The Experienced Angler; or, Angling improved, being a General Discourse of Angling. 8vo. Lond. 1662.

(Advertised as now newly extant, in the Kingdom's Intelligencer of Sept. 9, 1661.)

2nd edit. 12mo. Lond.—3rd edit. 12mo. Lond. 1668. 4th edit. 12mo. Lond. 1676. 5th edit. 12mo. Lond. 1683. 6th edit. 8vo. Lond. 1825. A reprint, with a Memoir of Colonel Robert Venables prefixed.

The second edition was probably printed about 1666, and burnt in the great fire; no copy is at present known.

Col. Venables' name first appears in the third edition.

(The fourth edition forms the third part of the Universal Angler.)

The Universal Angler; or, that Art Improved in all its parts, especially in Fly-Fishing. The whole interspersed with many curious and uncommon observations. 12mo. Lond. 1766.

(This book is copied from Bowlker's Art of Angling, printed at Worcester, with some few additions taken from Walton, Cotton, and Hawkins.)—*Wm. White.*

Walton's (Isaac, of Stafford) Compleat Angler; or, the Contemplative Man's Recreation, being a Discourse of Fish and Fishing, not unworthy the perusal of most Anglers. 12mo. Lond. 1653. 2nd edit. 12mo. Lond. 1655. 3rd edit. 12mo. Lond. 1664. 4th edit. 12mo. Lond. 1668. 5th edit. 12mo. forming the first of the Universal Angler, by Walton, Cotton, and Venables. 12mo. Lond. 1676.

The 2nd edit. which was published only two years after the first, appears to have been almost re-written with the introduction of a third interlocutor in *Auceps*, and great additions in every part.

The 3rd edit. Lond. 1661 and 1664, has titles of both dates, no other variance.

The 3rd edition is the first that has the postscript touching the Laws of Angling, and an index.

The 4th edition is a paginary reprint from the third edition.

The 5th edition is augmented, and the second part added on fishing for Trout and Grayling, written by Charles Cotton, Esq. of Beresford.

The above are all the editions of the Complete Angler, published during the author's life.

6th edit. 12mo. Lond. 1750, edited by Moses Browne. 7th edit. 12mo. Lond. 1759, by Moses Browne.

Walton's Compleat Angler. 8th edit. Lond. 1760. edited by John Hawkins, esq. afterwards Sir John Hawkins.

Advertised 27th Sept. 1759, as in the press and speedily will be published, in opposition to Moses Browne, 7th edit. published in that year. On the 1st July, 1760, it appeared announced as the only correct and complete edition, " and the reader was informed that cuts are now added of the principal scenes, designed by Mr. Wale, and engraved by Ryland, in which the characters are dressed in the habits of the times, which cuts, the reader may be assured, cost, in designing and engraving, upwards of one hundred pounds." Browne put forth a rival advertisement, showing his own emendation of the poetry, declaring the boasted plates " copied from the designs in his and the life of Walton, in chief part borrowed from the one printed by him."

In 1765, in May and June, advertisements were put forth of this edition by Rivingtons, with a new title.

9th edit. 8vo. Lond. 1766, edited by John Hawkins, esq. 10th edit. 12mo. Lond. 1772, edited by Moses Browne. 11th edit. 8vo. Lond. 1775, by Sir John Hawkins. 12th edit. 8vo. Lond. 1784, by Sir John Hawkins. 13th edit. 8vo. Lond. 1792, edited by John Sidney Hawkins, esq. 14th edit. 8vo. Lond. 1797, by Mr. Sidney Hawkins, but without the large plates. 15th edit. 8vo. Bagster, Lond. 1808 (printed in three sizes, demy 8vo. royal 8vo. and 4to.). 16th edit. a fac-simile reprint of the first edition, 1653, 12mo. Lond. 1810. 17th edit. edited by Sir Henry Ellis, with new notes, &c. printed for Bagster, in two sizes, demy 8vo. and royal 8vo. at Broxbourne, 1815.

Walton's Complete Angler. 8vo. Lond. 1822, published by Gosden, printed for J. Smith. Lond. 1823, published by Major. 2nd edit. by Major, Lond. 1824. 3rd edit. by Major, 1835. 48mo. Pickering, Lond. 1825. 32mo. Pickering, Lond. 1827. 2 vols. 12mo. Chiswick, by Whittingham, 1824, 1826.

Walton's and Cotton's Complete Angler, with Lives of the Authors by Sir Harris Nicolas, and Illustrations by Stothard and Inskipp. 2 vols. imperial 8vo. Lond. 1835-6.

This splendid edition contains the variations of all the editions, and additional notes, with original and elaborate Memoirs of Walton and Cotton which present many new facts of the writers.

Whitney's (John, a Lover of the Angle) Genteel Recreation; or, the Pleasures of Angling, a poem, with a dialogue between Piscator and Corydon. 12mo. Lond. 1700. Reprinted 1820. (Only one hundred copies printed.)

Whitney appears to have been a native of Kent, and was born about 1640.

Wilkinson's Angler's Complete Assistant. 4to.

Williamson (John, Gent. with above thirty years' experience), The British Angler; or, a Pocket Companion for Gentleman Fishers. 8vo. Lond. —. 8vo. Lond. 1740.

Williamson (Capt. T. author of the Wild Sports of India), The Complete Angler's Vade Mecum, being a perfect code of Instruction on that pleasing science. 8vo. Lond. 1808.

Wilson (Professor John), The Angler's Tent, a Poem, contained in his collected Poems. 2 vols. crown 8vo. Edinb. 1825.

To this Author is attributed the spirited reviews of Sir H. Davy's Salmonia and other works on Angling in Blackwood's Magazine.

Whole Art of Fishing; being a Collection and Improvement of all that has been written on the subject, with many new experiments. 8vo. Lond. Curl, 1714. 2nd edit. entitled the Gentleman Fisher; or, the Whole Art of Angling. 8vo. Lond. 1727.

Worlidge's (John) Mystery of Husbandry, (of Fishing, page 253—62). Folio, Lond. 1687.

Yarrell's (William) History of British Fishes, with Wood-cuts in the manner of Bewick. 2 vols. 8vo. Lond. 1835-6.

The most scientific work upon Fishes published in England. Several papers by the same author upon Fish are printed in the Linnean Transactions.

Young Angler's Assistant, or a New and Complete Treatise on the Art of Angling. 32mo. Lond. Mason, 1813.

Young Angler's Companion, containing the Whole Art, &c. 1682. A reprint of Gilbert varying the title, and has added "how to Fox Fish," to fill what was a blank page in the preceding editions.

Young Sportsman's Miscellany in Hunting, Shooting, Racing, Angling, &c. 12mo. 1826.

C. Whittingham, Tooks Court, Chancery Lane.